

The Senate

Select Committee on the
Scrutiny of New Taxes

Interim Report -

The Carbon Tax:
Economic pain for no environmental gain

October 2011

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Senate Select Committee on Scrutiny of New Taxes

43rd Parliament

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42nd Parliament

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Senator Michaelia Cash	Western Australia, LP
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Senator Brett Mason	Queensland, LP
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Executive Summary

The government's view of the economy could be summed up in a few short phrases: If it moves, tax it. If it keeps moving, regulate it. And if it stops moving, subsidise it. ~ Ronald Reagan

The nation is poised to embark upon a major economic reform which will have far reaching consequences for every Australian. The government's carbon tax may well become law but it lacks the credibility of past economic reforms, its timing is poor and the economic pain will not lead to any environmental gain.

The central issue the committee sought to address is not whether a carbon tax is good or bad in economic theory. The question before this committee and before the Parliament is whether Australia should implement such a tax, followed by an Emissions Trading Scheme, at a time of great uncertainty both about the economic outlook and even more so about the nature and extent of the international abatement effort.

These questions are particularly acute for Australia because our prosperity is based on a resource endowment that is highly carbon-intensive. Moreover and importantly, much of that carbon-intensity is not amenable to simple or obvious technological solutions – for instance, there is little that can be done to reduce fugitive emissions in mining.

It is against that backdrop that we need to assess whether it is desirable for us to impose a carbon tax if many other countries, including the world's largest emitters and our major resource competitors, do not.

The government's lack of mandate for a carbon tax

Prior to the 2010 Commonwealth Federal election the Australian people were promised no carbon tax by the Prime Minister, the Hon. Julia Gillard MP. Following a deal with the Greens and the Independents that allowed it to remain in power, the government announced the establishment of the Multi-Party Climate Change Committee. It first met on 7 October 2010, and on 24 February 2011 the Prime Minister announced that a carbon tax would be introduced. No specific details of the carbon tax were released at that time.

Since those events, the government has moved with haste to implement the carbon tax. The initial detail of the tax was released on 10 July 2011, with a complex and highly technical tranche of 19 Bills introduced into the Parliament on 13 September 2011. The government is set to force a vote by the Parliament on these Bills in late 2011. Because of the way they have been drafted there are major concerns about the ability of future governments, of any political persuasion, to amend the system the legislation will put in place.

The Australian community, which did not vote for a carbon tax, has been given little time to consider and comment on the 19 Bills. A rushed process has been compounded by the lack of transparency of the modelling underpinning the reform

process, where the data and models used have not been made public nor released for scrutiny.

Shifting emissions overseas

The government's plan imposes an impost on the competitiveness of all Australian businesses, without the same impost being imposed on our competitors. This will shift economic activity from Australia to countries without a carbon tax or an emissions trading scheme. As the Productivity Commission recently reported 'no country currently imposes an economy-wide tax on greenhouse gas emissions or has in place an economy-wide ETS.'¹

To reduce emissions in Australia in a way that just shifts them overseas into areas where there will be no carbon tax and where emissions will be higher for the same economic output is pointless. To help overseas emitters take market share from even the most environmentally efficient Australian business is not effective action on climate change; rather it is an irresponsible act of economic self-harm.

As economist Professor Henry Ergas points out:

... as well as being pointless, that action would be highly costly. For example, economic analysis shows, and experience confirms, that world minerals supply responds to relative prices, and does so reasonably quickly. If we tax our minerals exports, and competing sources of supply do not, world supply will shift to the untaxed sources, reducing our export volumes compared to the levels they would otherwise have attained. The result will be to reduce Australian real incomes (compared to the 'no tax' world), without yielding any gain in terms of diminishing the risks of climate change.²

The carbon tax will have a substantial impact on Australia, given that our economy is based around access to relatively cheap fossil fuels. Many Australian jobs are in industries that are carbon-intensive because our inexpensive access to hydrocarbons is an advantage Australia has on international markets. As the Productivity Commission stated in their submission to the Prime Ministerial Task Group on Emissions Trading in 2007:

Independent action by Australia to substantially reduce GHG emissions, in itself, would deliver barely discernible climate benefits, but could be nationally very costly. Such action would therefore need to rest on other rationales ... Australia's high living standards derive in part from the largely efficient use of an abundance of low cost fossil fuels, reflected in relatively high per capita emission levels. As a result, substantially reducing GHG emissions would be costly for the Australian community, with costs borne mainly by consumers and the owners (and employees) of businesses

1 Productivity Commission, *Carbon Emission Policies in Key Economies*, Research Report, May 2011, p. 50.

2 Professor Henry Ergas, *Committee Hansard*, 10 August 2011, p. 60.

that directly or indirectly rely on the intensive use of GHG producing energy sources.³

Because, as the Productivity Commission points out, reducing Australia's emissions would be so costly, the government's plan relies on purchasing billions of dollars of carbon emission credits from overseas. Indeed, according to the government's own modelling, Australians would have to purchase \$791.8 billion worth of carbon credits from overseas to 2050, in today's dollars. By 2050, Australians will be purchasing \$59.5 billion worth of credits in just one year.

There remain significant questions over whether existing international carbon trading schemes produce *additional* reductions in carbon emissions. There have also been a number of cases of corruption in these markets. Legislating for a scheme to reduce Australia's emissions in a way which relies so heavily on these still immature markets is premature.

The inefficiency of the government's carbon tax

Professor Ergas also notes that absent concerted and effective international action, including by Australia's resource competitors, a carbon tax would merely be an extremely inefficient form of taxation:

Estimates from Treasury's climate change modelling allow one to estimate the extent of the inefficiency. Using, for simplicity, a discount rate of zero, those estimates imply the present value of the income loss from the carbon tax and the subsequent ETS is approximately twice the present value of the revenue it raises. In other words, on those estimates, the tax has an average excess burden, defined as the income loss per unit of revenue raised, of 2. This is four times greater than the average excess burden of the most distorting tax identified by the Henry report, i.e. mining royalties and the crude oil excise... In other words, this tax would be more distorting of economic activity than any other tax we impose.⁴

The inefficiency is even starker when one realises that Treasury's estimate of the income loss is based on the assumption that credible international agreement on emissions reduction is reached relatively soon. Indeed, in a reply to questions posed by Professor Ergas, Treasury says that '[t]he modelling does not rely on an assumption that there is a perfectly harmonised global emission trading scheme.'⁵ But, it now admits, it does assume there is 'some mechanism' that 'allows individual firms or Government's themselves to trade abatement with other countries.'⁶

3 Productivity Commission 2007, Productivity Commission Submission to the Prime Ministerial Task Group on Emissions Trading, March, pp viii and 31.

4 Professor Henry Ergas, *"Dealing with Climate Change"*, Crawford School Dialogue: Australia's carbon price: good policy or not?, Australian National University, 5 September, 2011.

5 Professor Henry Ergas, 'Mr Garnaut, climate policy should be questioned', *The Australian*, 30 September 2011, p. 12.

6 Professor Henry Ergas, 'Mr Garnaut, climate policy should be questioned', *The Australian*, 30 September 2011, p. 12.

Professor Ergas commented on this admission:

What mechanism? No one knows. Where is the legislation that would put such a mechanism in place? No one knows. And what happens to the assessed costs if there is no such mechanism? Again, no one knows. And since the models and data are not public, nor will they, least of all the hoi polloi who will pay the price.⁷

The carbon tax has the potential to undermine wider reforms

Over the past 30 years, the Australian economy has gone through significant reform, which has made the economy open to world economic pressures and has improved the performance of infrastructure delivery, leading to lower electricity prices in particular. The Productivity Commission estimates that National Competition Policy reforms alone increased Australia's GDP by 2.5 per cent.

While delivering broad-based benefits to Australia, these reforms did impose large costs, particularly in the transition phase, on certain towns and communities which had to adjust to the new environment. Unfortunately, the carbon tax is set to have its biggest impact on these same communities. Some of the hardest hit towns from the carbon tax will be the electricity industry in the La Trobe Valley, the automotive industry in Geelong and Adelaide and the steel industry in Whyalla, the Illawarra and Newcastle.

In addition, these communities are often at the frontline of the so-called 'two-speed' or 'patchwork' economy. After becoming more internationally competitive and resourceful from the opening up of the Australian economy, they are seeing hard-won markets disappear due to a higher Australian dollar and higher input costs, partly exacerbated by the mining boom. Imposing a carbon tax on top of these pressures threatens to kindle an already smouldering situation.

Accordingly, the carbon tax has the potential to undermine the hard-fought acceptance of the economic reforms that have broadly benefited the Australian economy over the past 30 years. Such a reaction can already be seen in the calls for renewed industry assistance to the steel and manufacturing industries. Large-scale renewal of industry assistance would be a retrograde step.

Yet, imposing a carbon tax now gives renewed potency to those who would seek to resurrect such protections.

The overall impact on the economy – \$40,000 from every Australian

Unlike previous reforms, there is no broad economic bounty from a carbon tax that can be redistributed to offset disproportionate costs.

7 Professor Henry Ergas, 'Mr Garnaut, climate policy should be questioned', *The Australian*, 30 September 2011, p. 12.

In total, under the government's own modelling, the carbon tax is likely to impose a \$1 trillion cost on the Australian economy. As economist Professor Henry Ergas explained to the committee:

... the costs Treasury estimates are anything but trivial. Indeed, discounted at the Garnaut discount rate, they have a present value equal to \$1 trillion—that is, one year of Australia's GDP.⁸

This \$1 trillion figure is about equal to the total output of the Australian economy in one year. Or, to put it in other terms, the carbon tax will cost every Australian, on average, \$40,000.

This is likely to be an underestimate given that Treasury's modelling relies on the assumption that other countries will act in concert with Australia to reduce emissions.

The government has provided no evidence that its policy provides benefits commensurate with these costs. Indeed, without global action, a carbon tax in Australia cannot do anything to mitigate the effects of climate change. A carbon tax will be all economic pain for no environmental gain.

The need for a credible international agreement

Professor Ergas also notes that this assumption (of early global transition to a mechanism for setting a uniform carbon price) now plays a greater role in Treasury's modelling than it did for the CPRS:

Treasury has assumed away the problem. Indeed, it has done so even more starkly than in its work on the Rudd government's Carbon Pollution Reduction Scheme. Then, the base case (against which the costs of the CPRS were assessed) involved a world without abatement targets. This time, however, the modelling starts from the premise that global abatement efforts are in place, even after the commitment period for Cancun pledges ends. So the costs for Australia are only assessed assuming global abatement will occur and persist.⁹

As a result, Treasury's estimates of the economic costs of the government's proposed scheme are likely to be a substantial underestimate. In effect, were global agreement not reached but Australia nonetheless imposes a carbon tax, the income loss could be two to three times greater than Treasury's estimates suggest. This would make the carbon tax's average excess burden eight or more times higher than that of any other tax we impose. As Professor Ergas has explained:

... for every dollar of revenue this tax raised, [the carbon tax] would reduce income by eight or more dollars, whereas raising the same dollar of revenue by our current most distorting tax would only cost some 70 cents of income

8 Professor Henry Ergas, *Committee Hansard*, 10 August 2011, p. 61.

9 Professor Henry Ergas, 'Mr Garnaut, climate policy should be questioned', *The Australian*, 30 September 2011, p. 12.

loss. And all that for no benefit, as unilateral abatement by Australia has no effect on the likelihood of dangerous climate change.¹⁰

In short, unless there is credible, comprehensive action on a global scale, it is difficult to see why we would impose such a tax.

Flaws in the government's approach

The government and its advisers have simply evaded this obvious conclusion. Rather, their approach has been to argue that the rest of the world is acting to deal with climate change.

It is true voluntary commitments have been made, but the quantum of those commitments is highly uncertain, as is whether they will be implemented. There is deep scepticism that any legally binding agreement to reduce emissions can be reached before 2020 even by those involved in carbon trading markets. As a World Bank survey of market participants recently reported:

Survey respondents were not optimistic that a binding international agreement could be achieved in the short term.¹¹

While much has been said about China, there is no doubt that the subsidies China provides to emitters are very much greater than any measures it imposes to reduce emissions. Moreover, despite the glowing endorsement of China's efforts in the Garnaut report, it is interesting to note that while Treasury's modelling in 2008¹² assumed (at pages 82 and 86) that China would join a world effort in 2015, its latest modelling assumes (at page 42), (without even noting, much less explaining, the change) that China will only join that effort in 2021 (at page 32). There is little realistic prospect at this point of significant action by many of our major resource competitors.

Rather, the most realistic assessment at this point is that we will continue to see costly, ineffective and inefficient abatement measures adopted by a number of countries. As a result, good sense suggests Australia must take account of the possibility that comprehensive agreement will not be reached, and factor that into the decision. This suggests that to act now, while the global prospect is so uncertain, is reckless.

The cost of acting now

To this, the government's reply has been that acting now is less expensive than acting later. This claim is frequently made in Treasury's report on its modelling but no evidence was presented by Treasury to this committee that would substantiate it. Indeed, even on Treasury's own numbers, the opposite appears to be true, as Treasury's estimate of the income loss involved in meeting emissions abatement

10 Professor Henry Ergas, *"Dealing with Climate Change"*, Crawford School Dialogue: Australia's carbon price: good policy or not?, Australian National University, 5 September, 2011.

11 World Bank 2011, *State and Trends of the Carbon Market 2010*, Washington DC, (June 2011, p. 17).

12 http://www.treasury.gov.au/lowpollutionfuture/report/downloads/ALPF_report_consolidated.pdf (accessed 4 October 2011).

targets seems, for the core policy scenario, some 30 to 40 percent lower now than it was at the time of the CPRS.

A further argument put by the government is that we need a carbon tax to reduce the uncertainties facing investors, for instance in electricity generation. However, as Professor Ergas and others noted in their presentations to this committee, while investors do face uncertainties, including those associated with the future international framework for climate change, those uncertainties cannot be wished away by an Australian government. Rather, they are a fact of the current global situation. The carbon tax does not eliminate these global uncertainties in any way; it merely shifts them on to the community. It is by no means obvious that the community is better placed to bear those risks than are global capital markets and electricity consumers. Imposing such a tax as a means of reducing investment risk in electricity is a case of using a sledgehammer to crack a nut.

The government, echoed by Treasury in its appearance before this committee, also argues that the tax will replace more distorting alternatives. But an important effect of the substantial revenue raised by the tax is to reduce the opportunity cost to government of pandering to rent-seekers. As Professor Ergas has noted:

It is consequently unsurprising that the government is not proposing to dismantle the many forms of direct action in which it is currently engaged; on the contrary, it proposes to greatly scale them up, throwing many billions of dollars raised by the tax at a range of rent-seeking projects. Now, simple economics shows that, like turning up the volume on a faulty amplifier, adding a tax to other distorting interventions more often makes things worse than better; and if introducing the tax actually leads to the other distortions being scaled up, then outcomes are worse again. As a result, the supposed superiority of the tax is far from assured. And the problems are all the more acute with an ETS, where the costs of rent-seeking are lower and the benefits greater.¹³

Finally, the government has argued that the carbon tax is a form of insurance. But insurance makes the community better-off when adverse events occur. In contrast, this tax will make us worse off should our abatement efforts prove ineffective because other, far larger, emitters continue to increase their emissions, as seems likely. As a consequence of being worse off, we will be even more poorly placed to adjust and adapt to harmful climate change, should it occur.

In other words, this is not a tax that helps achieve our goals but compromises them; that rather than make our prosperity and future safer, endangers it; and that is merely an instance of politics seeking to triumph over prudence and sensible economics.

Uncertainty in the global economy

Since the announcement to introduce the carbon tax on 24 February 2011, the world economy has re-entered a period of uncertainty and pessimism driven by sovereign debt concerns in Europe and the United States of America. As just one example of this

13 Henry Ergas, *"Dealing with Climate Change"*, Crawford School Dialogue: Australia's carbon price: good policy or not?, Australian National University, 5 September, 2011.

increasing gloom, the Australian stock market has lost almost a quarter of its value since the government announced the carbon tax. Despite the re-emergence of a troubling global economic outlook, the government appears determined to press ahead regardless of the risk to the Australian economy from another tax.

The committee is opposed to the carbon tax, but not to action in relation to climate change. The committee's view is that this is not the time to proceed with the tax and certainly not in its present form.

The publicly available information from the Treasury modelling that underpins the carbon tax, as well as modelling commissioned by the governments of New South Wales, Victoria, Queensland and Western Australia, all point to reduced growth and a hit to employment. Despite the potential cost to the economy and the uncertain global economic environment, the government is determined to proceed.

The evidence provided to the committee paints a compelling picture. The views of Australian businesses gathered by this inquiry present a gloomy picture of the impact of the government's carbon tax. The industries that generate our nation's prosperity in mining, agriculture and manufacturing will be hit with a tax that their competitors will not be paying.

Under the government's carbon tax, Australian businesses will bear a cost impost that is self-inflicted and will add to the pressure for them to relocate, most likely to where such a tax is not payable and where production methods lead to higher emissions.

In the absence of a truly effective global agreement, Australian businesses and those that depend on them will pay the price as jobs and investment move offshore. Countries that opt out of contributing to tackling climate change will be the gainers, while Australian businesses battling global economic uncertainty, a high dollar and ever rising taxes will face challenging times.

Treasury modelling

If all this was not enough, in the course of the inquiry, the committee has been made aware of a number of quite significant shortcomings with the modelling conducted by Treasury:

- it has not modelled the quite probable scenario where Australia imposes an economy-wide carbon tax and other countries, particularly its resource competitors, do not;
- the modelling significantly underestimates the costs of the tax, by not modelling the transactional macroeconomic costs of the tax;
- it has not performed a cost-benefit analysis of the effect of imposing a carbon tax or completed a proper Regulatory Impact Statement as required by best practice;
- it assumes that the economy will maintain full employment;
- its estimate of the effects of changes to the Renewable Energy Target scheme is at odds with analysis conducted for the New South Wales and Queensland governments;

- the decision not to release modelling of the impact of a carbon tax on specific regions of Australia, unlike the modelling released by some State governments; and
- it has not allowed public scrutiny of its full models, datasets and specifications, in contrast to the approach taken by the Productivity Commission with its modelling.

Recommendations

Recommendation 1

It is the Committee's view that the carbon tax should be opposed and the legislation defeated in the Parliament as:

- **there is no electoral mandate for the carbon tax;**
- **the modelling that supports it is based on a number of highly contestable assumptions;**
- **it is likely to undermine Australian businesses' ability to compete in the global economy;**
- **it will have significant adverse effects on particular sectors and regions, with a particularly disproportionate impact on regional Australia;**
- **the effect of the policy on the cost of living, and on jobs is likely to be higher than the government's current estimates indicate;**
- **there is considerable evidence that the carbon tax will not result in any real environmental gain, despite imposing a significant cost on the economy over the next thirty years.**

The Committee recommends that the carbon tax be opposed by the Parliament.

Recommendation 2

The Committee recommends that if the Parliament believes that it should proceed with the carbon tax, any provisions in the legislation designed to bind future governments seeking to prevent them from amending or rescinding the scheme be removed.

Recommendation 3

The Committee recommends that if the Parliament believes that it should proceed with the carbon tax, that it does so once current global economic circumstances have improved and there is a legally binding global agreement on tackling climate change.

Recommendation 4

The Committee recommends that, should the government remain committed to proceeding with its carbon tax, before any vote the Senate should demand that:

- **the government release all of its modelling, including the actual models, datasets and specifications used by the Treasury, to allow third party review;**
- **the government establish an Independent Expert Panel to review its modelling approach and framework;**
- **the Productivity Commission be asked to undertake a cost-benefit analysis of the proposed carbon tax;**
- **the legislation should be amended to ensure that any increase in the tax or lowering of the emissions cap be made a disallowable instrument and to ensure that carbon permits are not private property.**

Chapter 1

Inquiry into a carbon tax

Terms of reference

1.1 On Thursday, 30 September 2010, the Senate established the Select Committee on the Scrutiny of New Taxes to inquire into a broad range of matters relating to taxation, such as:

- (a) new taxes proposed for Australia, including:
 - (i) the minerals resource rent tax and expanded petroleum resource rent tax,
 - (ii) a carbon tax, or any other mechanism to put a price on carbon, and
 - (iii) any other new taxes proposed by Government, including significant changes to existing tax arrangements;
- (b) the short and long term impact of those new taxes on the economy, industry, trade, jobs, investment, the cost of living, electricity prices and the Federation;
- (c) estimated revenue from those new taxes and any related spending commitments;
- (d) the likely effectiveness of these taxes and related policies in achieving their stated policy objectives;
- (e) any administrative implementation issues at a Commonwealth, state and territory level;
- (f) an international comparison of relevant taxation arrangements;
- (g) alternatives to any proposed new taxes, including direct action alternatives; and
- (h) any other related matter.¹

1.2 Given the extensive scope of the terms of reference the committee resolved to report to the Senate on a subject by subject basis as each matter referred had been inquired into.

1.3 This report sets out the committee's findings of its inquiry into a carbon tax.

Conduct of the inquiry to date

1.4 Following its establishment and the resolution to inquire into the terms of reference on a subject by subject basis, the committee advertised its inquiry into a

1 *Journals of the Senate*, 2010, pp 119-120.

carbon tax in the national press (*The Australian*) and invited written submissions by 29 April 2011. Details of the inquiry were published on the committee's website.² The committee also wrote to a large number of stakeholders inviting submissions. Given the strong interest in the inquiry, submissions continued to be lodged after the closing date.

1.5 To begin with, the committee received 61 submissions. After the release of the government's climate change plan, which included a carbon tax, on Sunday, 10 July 2010 a further 51 were received (including 10 supplementary submissions). The committee sought further submissions and sought them by 15 August 2011. In total 112 submissions were received. A total list of the submissions received can be found in Appendix 1.

1.6 Initially, five public hearings were held in Perth, Melbourne and Canberra between March and June 2011. Following the announcement of the Clean Energy Future Legislative Package on Sunday, 10 July 2011 a further series of public hearings were held in Sydney, Brisbane, Tamworth, Mackay, Canberra and Geelong.

1.7 The witnesses who appeared before the committee at its hearings are listed in Appendix 2.

Acknowledgement

1.8 The committee extends its sincere thanks to all parties who contributed to, and participated in, the inquiry process by making submissions and/or appearing before it.

Structure of the report

1.9 This report into a carbon tax is comprised of 10 chapters.

- Chapter 2 provides an introduction and background into Australia's emissions profile, as well as a brief history of recent events in Australia's climate change policy. It charts the recent development of the Rudd and Gillard Labor governments' climate change policies.
- Chapter 3 contains an overview of the carbon tax.
- Chapter 4 looks at the impact of the carbon tax on Australia's emissions-intensive trade exposed sectors. These industries are the ones that contribute so much to Australia's economic prosperity and include the mining, steel, aluminium industries as well as manufacturing industries.
- Chapter 5 considers the needs of the electricity industry under the carbon tax. As a fundamental part of modern Australian life and key input into Australia's key industries, the ongoing effectiveness of the electricity industry is too important to be put at risk by the carbon tax.

² http://www.aph.gov.au/Senate/committee/scrutinynewtaxes_ctte/national_mining_taxes/index.htm.

- Chapter 6 provides an overview of the impact of the carbon tax on regional and rural Australia.
- Chapter 7 provides an overview of the impact of the carbon tax on households and the cost of living. This chapter highlights the risk to the budgets of everyday Australian's under a carbon tax.
- Chapter 8 looks at the impact of the carbon tax on Australia's economy and the Budget.
- Chapter 9 looks at the impact of the carbon tax on Australia's transport industry.
- Chapter 10 assesses the Treasury modelling.

Chapter 2

The Australian responses to climate change

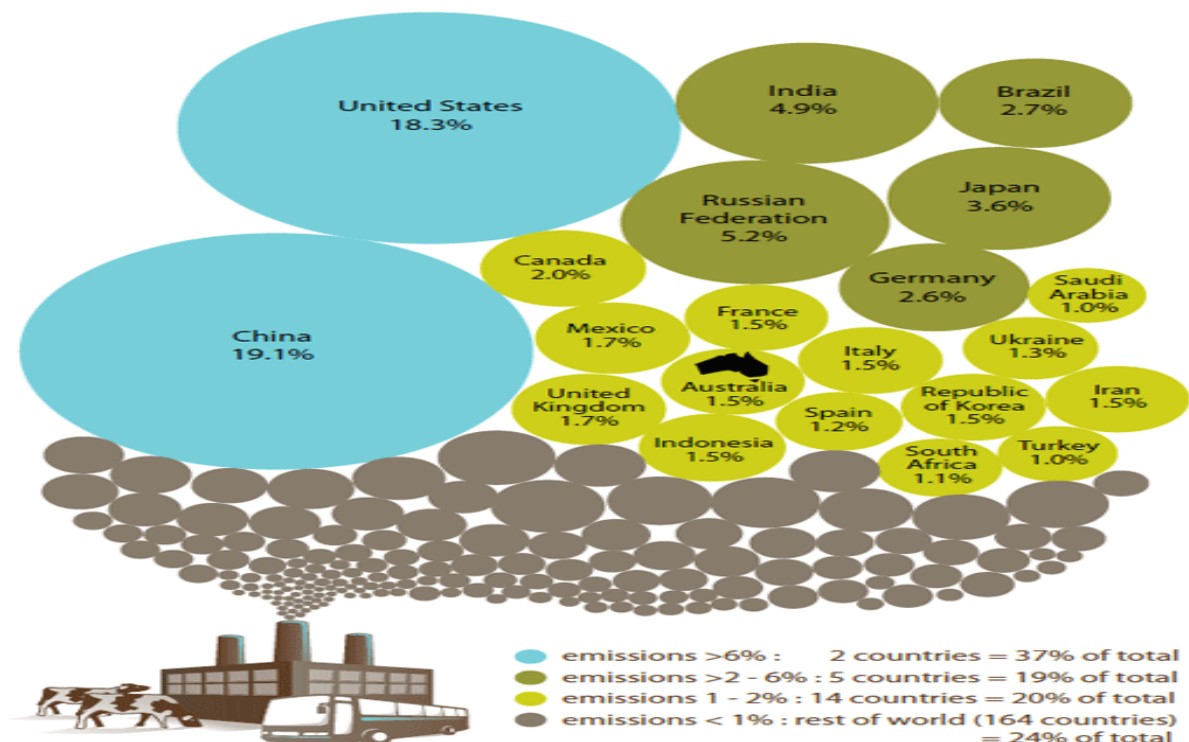
Introduction

2.1 Chapter two provides an overview of the development of Australia's responses to climate change. It charts Australia's domestic actions and gives an account of the involvement in international mechanisms to tackle climate change. This chapter also traces the deeply flawed policy development process that has dogged the development of the carbon tax.

Australia's emissions in context

2.2 According to the Department of Climate Change and Energy Efficiency, Australia represents about 1.5 per cent of anthropogenic global greenhouse gas emissions.¹ Graphic 2.1 puts Australia in an international comparison.

Graphic 2.1: International greenhouse gas emissions²

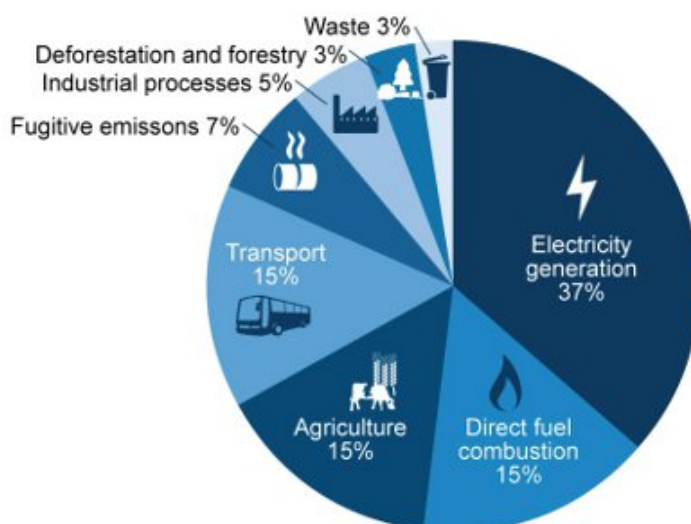


1 Department of Climate Change, *Australia: Part of the Climate problem – Part of the Solution*, Fact Sheet – International Climate Change Action: Module 3, p. 1 and Australian Government, *Clean Energy Future – Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 11.

2 Department of Climate Change, *Australia: part of the Climate problem – Part of the Solution*, Fact Sheet – International Climate Change Action: Module 3, p. 1.

2.3 Australia emitted 565 million tonnes of carbon dioxide emissions in 2009, the last year with available figures.³ The graphic below highlights the sources of Australia's emissions. It indicates that electricity generation, direct fuel combustion, agriculture and transport are the main sources of emissions.

Graphic 2.2: Australia's carbon pollution profile⁴



2.4 Even taking into account the Renewable Energy Target and the Carbon Farming Initiative, Australia's carbon emissions trajectory is projected to rise to 679 million tonnes in 2020, in the absence of further action to reduce carbon dioxide emissions.⁵

Australia and international agreements on climate change policy

2.5 The international negotiation process to reduce global greenhouse gas emissions is organised around the sessions of the Conference of the Parties to the United Nations Framework on the Convention on Climate Change (UNFCCC). The Conference of the Parties meets every year to review progress and take decisions on the Convention's implementation. Additional negotiation sessions are scheduled between each Conference of the Parties to develop the draft text that will go forward to the Conference for decision. Some of the UNFCCC milestones are outlined below.⁶

3 Australian Government, *Clean Energy Future – Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 11.

4 Australian Government, *Clean Energy Future – Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 13.

5 Australian Government, *Clean Energy Future – Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 13.

6 <http://www.climatechange.gov.au/government/international/international-climate-change-negotiations/cancun/overview.aspx> (accessed 13 July 2011).

Graphic 2.3: International meetings to tackle climate change⁷

1992	1997	2001	2005	2007	2009	2010	2011+
<p>The United Nations Framework Convention on Climate Change (UNFCCC) is agreed (it entered into force in 1994).</p> <p>194 countries have now ratified the UNFCCC as the basis for a global response to climate change.</p>	<p>COP3 (Kyoto, Japan) adopts the Kyoto Protocol, an international and legally binding agreement to reduce greenhouse gas emissions in developed countries.</p> <p>The first commitment period under the Protocol starts in 2008 and ends in 2012.</p>	<p>COP7 (Marrakesh, Morocco) adopts the detailed rules for implementing the Kyoto Protocol (the "Marrakesh Accords").</p>	<p>The Kyoto Protocol, enters into force, 192 countries have now ratified.</p>	<p>COP13 (Bali, Indonesia) adopts the Bali Road Map (and Bali Action Plan) – a set of decisions to negotiate a post-2012 global agreement - essential to reaching a secure climate future - and sets out the 2 year negotiation process required to finalise this.</p> <p>Australia ratifies the Kyoto Protocol.</p>	<p>COP15 (Copenhagen, Denmark) is the largest UNFCCC meeting ever held (27,000 participants, including 120 Heads of State).</p> <p>Leaders drafted the Copenhagen Accord that captures key areas of agreement, including limiting temperature rise to less than 2 degrees and jointly mobilising US\$100 billion a year by 2020.</p>	<p>COP 16 (Cancun, Mexico)</p>	<p>COP 17 (South Africa).</p> <p>First commitment period under the Kyoto Protocol ends in 2012.</p>

Kyoto Protocol

2.6 The Kyoto Protocol, an international agreement setting legally binding greenhouse gas emissions reduction targets for developed countries, was adopted on 11 December 1997. It entered into operation on 16 February 2005. While developing countries can sign up to the Protocol, they are not subject to the legally binding targets.⁸

2.7 In 1998 the Australian Government, under then Prime Minister, the Hon. John Howard, established the Australian Greenhouse Office, which at the time was the world's first government agency dedicated to cutting greenhouse gas emissions.

2.8 Australia signed the Kyoto Protocol on 24 April 1998 but did not ratify it until 12 December 2007. Under the Protocol, Australia committed to cutting its average greenhouse gas emissions to 108 per cent of 1990 emissions, over the 2008-12 commitment period.⁹ Australia is on track to meet its Kyoto target.¹⁰

7 <http://www.climatechange.gov.au/government/international/international-climate-change-negotiations/cancun/overview.aspx> (accessed 13 July 2011).

8 Senate Select Committee on the Scrutiny of New Taxes, Fuel and Energy, *The CPRS: Economic cost without environmental benefit*, Interim Report (May 2009), p. 2.

9 Senate Select Committee on the Scrutiny of New Taxes, Fuel and Energy, *The CPRS: Economic cost without environmental benefit*, Interim Report (May 2009), p. 3.

2.9 On 4 May 2009, the government committed to a new medium term target of emissions reduction of up to 25 per cent relative to 2000 emission levels, subject to action being taken by the rest of the world.¹¹

United Nations Climate Conference – Copenhagen, Denmark

2.10 In December 2009, representatives from governments and other organisations met in Copenhagen to map out further measures to reduce global greenhouse gas emissions. There was much expectation that Copenhagen would prove to be the first step on the way to establishing a comprehensive, legally binding agreement to limit carbon dioxide emission in both developed and developing countries. As the (then) Prime Minister said in the lead up to the Conference:

Let me tell you, the direction in which we are pushing hard, which the Danes are pushing hard and which I believe the Americans are pushing hard, is for an operational framework agreement, capable of giving real guidance to technical negotiators to translate into a legally binding global treaty.¹²

2.11 The Copenhagen Conference was widely recognised as a failure. Participants were unable to reach agreement on a global framework to price carbon, with important players pursuing sectional interests that impeded the progress of negotiations:

... at all-day talks between 115 world leaders, it was left to Barack Obama and Wen Jiabao, the Chinese premier, to broker a political agreement. The so-called Copenhagen accord "recognises" the scientific case for keeping temperature rises to no more than 2C but does not contain commitments to emissions reductions to achieve that goal.¹³

2.12 Kevin Rudd at the time agreed that the results of Copenhagen did not meet expectations:

Did it [Copenhagen] achieve everything that we wanted to achieve? Absolutely not.¹⁴

2.13 As the World Bank reported six months after Copenhagen:

10 Clean Energy Future website, <http://www.cleanenergyfuture.gov.au/why-we-need-to-act/what-others-are-doing/international-united-nations-negotiations/> (accessed 3 October 2011).

11 Department of Climate Change and Energy Efficiency, *Strengthening Australia's 2020 carbon pollution target*, Fact Sheet, May 2009.

12 ABC News, 'Rudd calls for Copenhagen courage', 18 November 2009, <http://www.abc.net.au/news/2009-11-18/rudd-calls-for-copenhagen-courage/1147556> (accessed 5 October 2011).

13 John Vidal, Allegra Stratton and Suzanne Goldenberg, 'Low targets, goals dropped: Copenhagen ends in failure', <http://www.guardian.co.uk/environment/2009/dec/18/copenhagen-deal> (accessed 3 October 2011).

14 ABC TV, Q&A, 8 February 2010, <http://www.abc.net.au/tv/qanda/txt/s2811552.htm> (accessed 5 October 2011).

...the Copenhagen climate conference's inconclusive outcome has deepened the sense of uncertainty over the future of the global emission reductions effort and the likelihood that international policymakers will be able to reach a legally binding agreement next December in Cancún.¹⁵

2.14 The driving force behind the collapse of a meaningful international agreement are complex, but they can be distilled down to:

Lastly, and perhaps most important, China and India seem unlikely to agree to internationally binding commitments to emissions-cutting actions any time soon. Both countries appear to believe that they are unlikely to receive substantial benefits -- large financial assistance, for instance -- that would, for them, justify adopting such measures, and developed countries do not seem willing to change that calculus. At the same time, the United States would be unwise to push for a deal that requires legally binding commitments while its own domestic efforts remain embroiled in political uncertainty.¹⁶

2.15 China had clear goals for what it wanted to accomplish at Copenhagen:

As both the largest greenhouse gas emitter and the country expected to account for the largest percentage of increased emissions between now and 2050, China inevitably played a critical role at Copenhagen. Beijing apparently had three major goals: 1. to maintain the structure of the Kyoto Protocol and the principles of the Bali Roadmap, which placed major responsibility for emissions reductions and contributions to developing countries on the shoulders of the Annex I countries; 2. to avoid all legally binding international commitments in favor of preserving China's own freedom of action in the future; and 3. to avoid becoming the target of criticism should Copenhagen "fail".¹⁷

2.16 Following the conclusion of Copenhagen:

Australia submitted information on its 2020 emissions reduction target range to the secretariat on 27 January 2010: 5 per cent unconditional, with up to 15 per cent and 25 per cent both conditional on the extent of action by others, as announced by the Prime Minister on 4 May 2009.¹⁸

15 World Bank 2011, *State and Trends of the Carbon Market 2011*, Washington DC, June 2011.

16 Michael Levi, 'Beyond Copenhagen', *Foreign Affairs*, 22 February 2010, <http://www.foreignaffairs.com/articles/65985/michael-levi/beyond-copenhagen?page=2> (accessed 3 October 2011).

17 Kenneth G. Lieberthal, 'Climate Change and China's Global Responsibilities', *Brookings*, 23 December 2009, http://www.brookings.edu/opinions/2009/1222_china_climate_lieberthal.aspx (accessed 3 October 2011).


18 Department of Climate Change, 'Australia welcomes the Copenhagen Accord and urges further action', <http://www.climatechange.gov.au/government/international/international-climate-change-negotiations/copenhagen-accord.aspx> (accessed 13 July 2011).

United Nations Climate Conference - Cancun, Mexico

2.17 At the Cancun Conference between 29 November and 10 December 2010, a range of developed and developing countries made 'pledges' to reduce their national greenhouse gas emissions. However, a legally binding agreement to reduce carbon dioxide emissions remained out of reach.

2.18 Country's pledges were made in different ways. Australia's pledge was made in the form of an absolute reduction, expressed as a percentage below an emissions level in an earlier year. The table below puts Australia's absolute reduction in context with other countries.

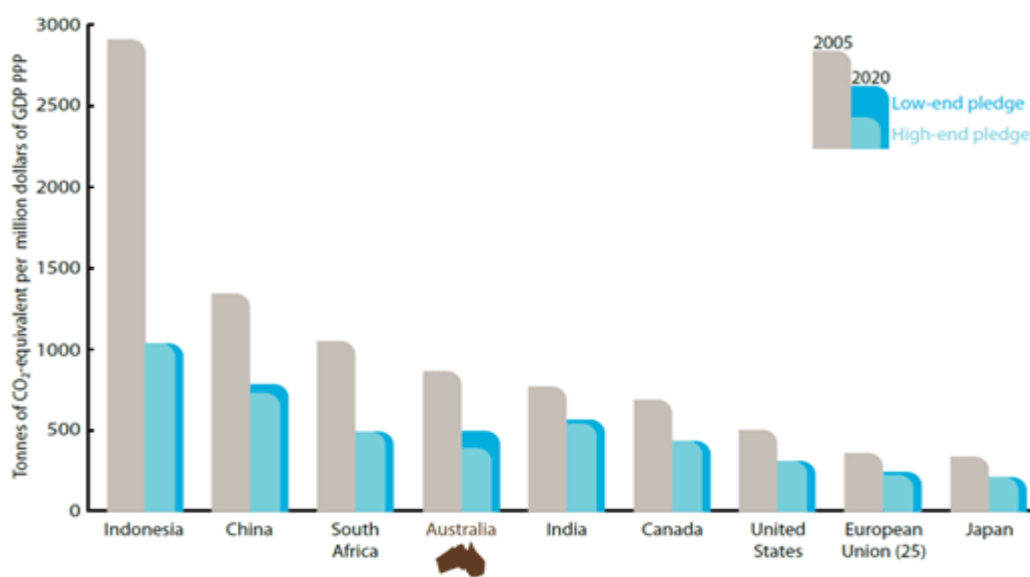
Table 2.1: Absolute greenhouse gas emission reduction made at Cancun¹⁹

Reduction in	Country	Target (%)	Relative to
Carbon intensity	China	40 to 45	2005
Emissions intensity	India	20 to 25	
Absolute emissions	European Union	20 to 30	1990
	Japan	25	
	Russian Federation	15 to 25	
	Australia 	5 to 15 or 25	
	Canada	17	2005
	United States	17	
	Brazil	36.1 to 38.9	business as usual
	Indonesia	26	
	Mexico	30	
	South Africa	34	
Republic of Korea	30		

2.19 Some countries expressed their pledge as a reduction in emission intensity. That is, greenhouse gases produced per unit of economic output. The graphic below, puts Australia's pledge and that of other countries into the scale of emissions intensity reductions.

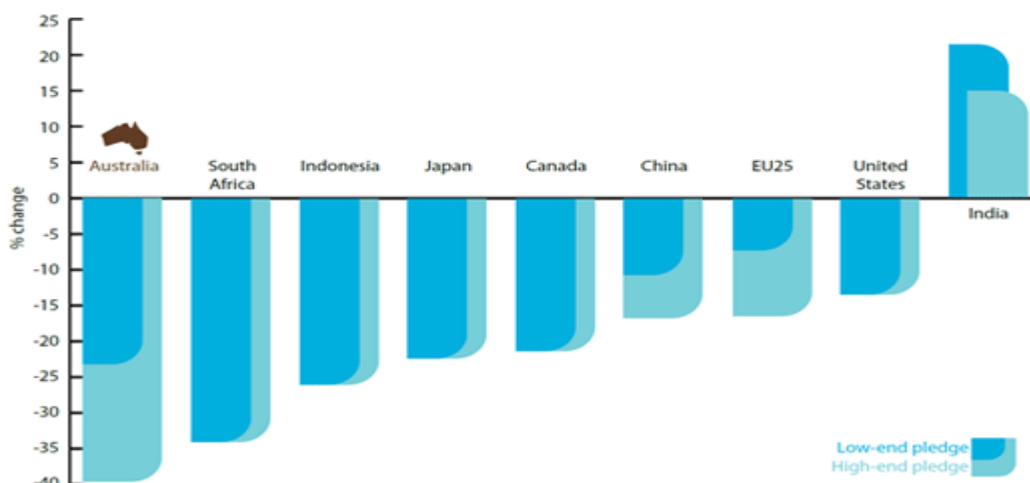
¹⁹ Department of Climate Change, *International Pledges on Climate Change Action: the Future*, Fact Sheet – International Climate Change Action: Module 2, p. 1.

Graphic 2.4: Emissions intensity of key economies in 2005 and 2020 (low and high end pledge)²⁰



2.20 In addition to the methods of expressing reductions in greenhouse gas emissions as outlined above, a further approach is to express a target as being below a business as usual standard. Graphic 2.5 shows Australia in the context of the business as usual method of examining reductions in greenhouse gas emissions.

Graphic 2.5: Percentage change in emissions under Cancun pledges, relative to business as usual at 2020²¹



20 Department of Climate Change, *International Pledges on Climate Change Action: the Future*, Fact Sheet – International Climate Change Action: Module 2, p. 3.

21 Department of Climate Change and Energy Efficiency, *International Pledges on Climate Change Action: the Future*, Fact Sheet – International Climate Change Action: Module 2, p. 4.

2.21 On 19 September 2011, the United States Energy Information Administration released a table showing emission reduction goals announced by selected countries. Table 2.2 is a summary of that table:

Table 2.2: Emissions mitigation goals announced by selected countries (million metric tons carbon dioxide)²²

Country/region	Reduction goal	Carbon dioxide emissions goal for 2020 ^a	Business as usual emissions without action	2008 emissions	Emissions reduction needed to achieve goal
Countries with goals for total emissions reductions					
United States	To 17 percent below 2005 level by 2020	4,977	5,777	5,838	800
OECD Europe ^b	To 20 percent below 1990 level by 2020	3,301	4,147	4,345	846
	To 30 percent below 1990 level by 2020	2,889	4,147	4,345	1,249
Japan	To 25 percent below 1990 level by 2020	785	1,142	1,215	357
Brazil	By 36 to 39 percent relative to projected level in 2020	353-371	579	423	208-226
Russia	To between 15 and 25 percent below 1990 level by 2020	1,776-2,013	1,607	1,663	--
Countries with goals for carbon dioxide intensity reductions					
China	To between 40 and 45 percent below 2005 level by 2020	10,149-11,071 ^c	10,128	6,801	--
India	To between 20 and 25 percent below 2005 level by 2020	2,512-2,679 ^c	2,056	1,462	--

^a It is assumed that country goals are applied proportionally to energy-related carbon dioxide emissions and other greenhouse gases.

^b Because *IEO2011* does not model the European Union as a region, emissions and projections for OECD Europe are used as a proxy. The reduction goal is based on 20 percent of the 1990 level for OECD Europe. Although some countries in OECD Europe are not members of the European Union, the European Union also includes some countries that are not included in the OECD Europe region. On balance, OECD Europe's 1990 emissions were 2 percent higher than the European Union's emissions. In 2005 and 2008, OECD Europe's emissions were about 2 percent and 3 percent lower than the European Union's emissions, respectively. The difference could be more pronounced in future years, depending on emissions from the various countries. Conference of Parties-16 omitted Turkey from the European Union's commitments; *IEO2011* includes Turkey as part of OECD Europe.

^c Carbon dioxide intensity is defined as emissions per unit of output (as measured by GDP expressed in purchasing power parity). The carbon dioxide emissions goal is calculated by multiplying the 2020 carbon intensity goal by *IEO2011* GDP projections for 2020.

22 U.S. Energy Information Administration, *International Energy Outlook 2011*, Report Number DOE/EIA-0484 (2011), 19 September 2011, <http://www.eia.gov/forecasts/ieo/table17.cfm> (accessed 28 September 2011).

Source: Reduction goals: United Nations Framework Convention on Climate Change, National Reports, Appendix I—Quantified Economy-wide Emissions Targets for 2020, website <http://unfccc.int/home/items/5265.php>. Reduction goal targets: Estimated based on announced targets, and EIA, estimates. 2008 emissions: EIA, International Energy Statistics database (as of March 2011), website www.eia.gov/ies. Goal year projected Reference case carbon dioxide emissions: EIA, World Energy Projection System Plus (2011).

2.22 Under the Copenhagen Accord, various developed and developing countries made pledges regarding their actions to reduce emissions. The Copenhagen Accord itself represents the difficulties faced by disparate countries engaging in collective action to solve a common problem: climate change.

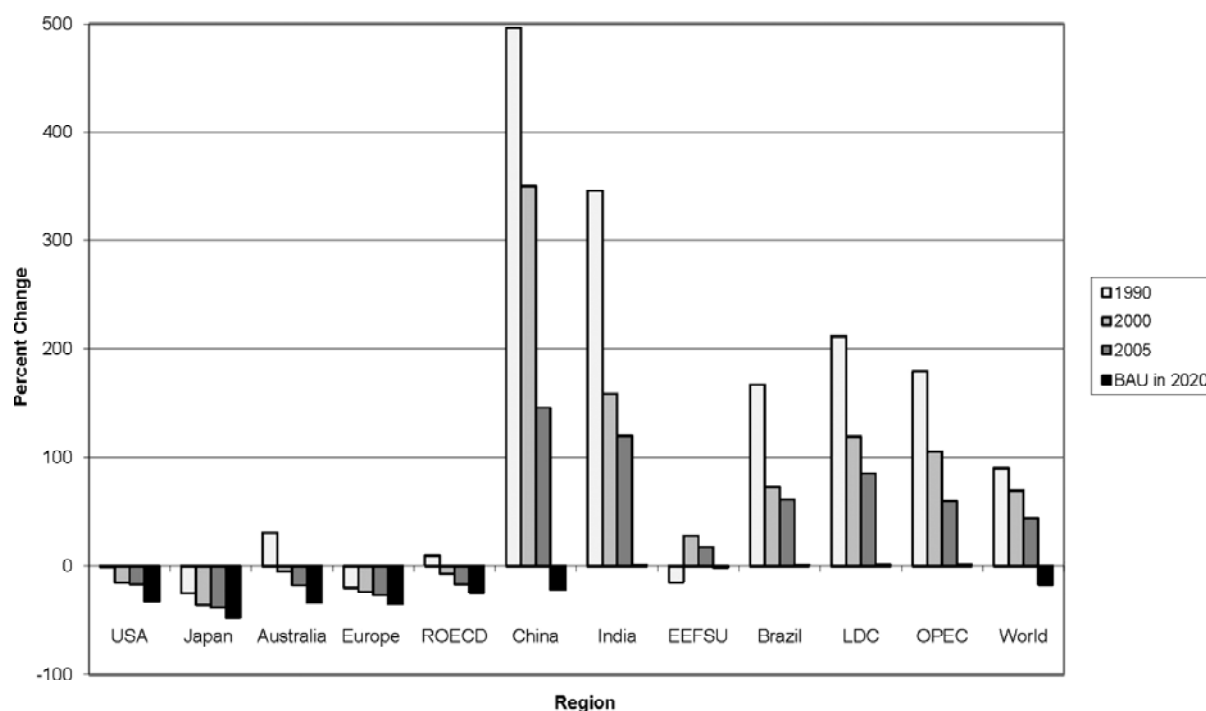
2.23 Under the pledge framework, many countries have provided qualitative pledges in terms of a percent reduction either in terms of emissions or emissions intensity from a specific year or a 2020 business as usual projection.

2.24 The difficulty with the pledge framework is that the 'Accord is binding politically, but not legally'.²³ In addition, '[m]any pledges are conditional, and these conditions go to some of the most contentious issues in the international negotiations...'.²⁴

2.25 With the underlying difficulties of the Copenhagen Accord set to one side, it is sensible to ask what impact the Accord will have on emissions. As mentioned earlier, different countries have used different approaches for their 'Pledges'. A study led by Australian economist Warwick McKibbin converted the different 'Pledges' to a common value and this has enabled a clearer comparison of the respective efforts by different countries. In essence it is now possible to compare oranges with oranges rather than apples with oranges. Graphic 2.6 shows a cross-section of emitters and their respective action.

23 Institute for 21st Century Energy, *Copenhagen Accord by the Numbers*, p. 1.

24 Institute for 21st Century Energy, *Copenhagen Accord by the Numbers*, p. 5.

Graphic 2.6.: 2020 policy scenario with reductions to selected based years²⁵

2.26 The striking feature of graphic 2.6 is that the US, Japan, Europe and Australia all reduce emissions in 2000, 2005 and the Businesses As Usual case in 2020. The emissions of China and India are substantially higher. China's emissions are a staggering 496 per cent above its 1990 levels when compared to the 2020 Business As Usual case while Australia's are 30 per cent above the same benchmark. While climate change policies will be biting hard in some countries, other nations will not be making the same contribution to reduce emissions.

2.27 Treasury has reported the government's expectations of global emissions for some time. An important point to note relates to Treasury modelling about carbon dioxide emissions in China. Current carbon dioxide emissions in China are reported at 10.3 billion tonnes.²⁶ In 2008 Treasury modelling expected Chinese carbon dioxide emissions in 2020 to reach 16.1 billion tonnes.²⁷ The most recent Treasury modelling conducted in the context of the carbon tax in 2011 now expects Chinese carbon dioxide emissions in 2020 to reach 17.9 billion tonnes.²⁸ This is a staggering 1.8 billion tonne increase in expected carbon dioxide emissions per year from China by 2020.

25 Warwick J. McKibbin, Adele C. Morris, Peter J. Wilcoxon, 'Comparing Climate Commitments: A Model-Based Analysis of the Copenhagen Accord', *Climate Change Economics*, 2011, vol 2, no. 2, p. 90.

26 Australian Government, *Strong Growth, Low Pollution: Modelling a carbon price*, p. 164.

27 Australian Government, *Australia's Low Pollution Future: The Economics of Climate Change Mitigation*, p.31

28 Australian Government, *Strong Growth, Low Pollution: Modelling a carbon price*, p. 164.

2.28 Tables 2.3 to 2.6 provide the source for the afore mentioned material on China's emissions and the revised forecast by the Treasury:

Table 2.3: Treasury modelling 2008 – China and others forecast emissions 2011²⁹

Table 3.1: Global emissions

	Emissions by region				Emissions by gas and type		
	2005 Gt CO ₂ -e	2020 Gt CO ₂ -e	2050 Gt CO ₂ -e		2005 Gt CO ₂ -e	2020 Gt CO ₂ -e	2050 Gt CO ₂ -e
United States	7.2	7.7	9.4	Carbon dioxide	31.1	45.7	84.5
EU-25	4.9	5.2	5.5	Combustion	27.0	42.0	78.1
China	7.2	16.1	31.4	Fugitive/Industrial process	1.2	2.3	5.8
Russia + CIS	3.3	4.7	5.5	Waste	0.04	0.04	0.03
Japan	1.4	1.3	1.1	LUCF	2.8	1.4	0.5
India	1.8	3.7	11.7	Methane	5.3	7.3	11.0
Canada	0.8	0.9	1.2	Combustion	0.4	0.5	0.8
Australia	0.6	0.7	1.0	Fugitive/Industrial process	3.6	5.3	8.4
Indonesia	0.8	1.0	2.2	Waste	1.3	1.5	1.8
South Africa	0.5	0.7	1.4	Nitrous oxide	2.4	3.4	5.6
Other South and East Asia	1.7	1.9	3.7	Combustion	1.4	2.1	3.1
OPEC	1.8	2.9	6.2	Fugitive/Industrial process	0.9	1.3	2.4
Rest of world	7.2	10.2	22.2	Waste	0.03	0.03	0.03
Total	39.1	57.2	102.3	Other gases	0.4	0.7	1.3
				Total	39.1	57.2	102.3

Source: Treasury estimates from GTEM.

Table 2.4: Treasury modelling 2008 China and others 2020³⁰

**Table 5.17: GTEM regional emissions
Change from 2001**

	2020				2050			
	CPRS	CPRS	Garnaut	Garnaut	CPRS	CPRS	Garnaut	Garnaut
	-5	-15	-10	-25	-5	-15	-10	-25
	Per cent				Per cent			
United States	-19	-26	-20	-33	-62	-74	-62	-83
European Union	-16	-22	-16	-26	-48	-57	-47	-63
China	120	99	128	89	89	75	91	47
Russia + CIS(a)	11	2	10	-7	-56	-77	-54	-85
Japan	-15	-19	-14	-20	-50	-57	-49	-63
India	38	25	54	30	139	89	145	56
Canada	-5	-12	-4	-16	-36	-53	-35	-63
Australia	3	-8	3	-15	-42	-71	-39	-77
Indonesia	-23	-33	-21	-40	-25	-53	-12	-61
South Africa	26	14	26	5	-4	-32	-7	-56
Other South and East Asia	-43	-54	-39	-63	-95	-136	-76	-142
OPEC	45	36	48	32	106	66	94	0
Rest of world	47	47	2	-17	43	16	52	-2
World	21	12	15	-4	-2	-22	2	-39

Note: (a) Commonwealth of Independent States.

Source: Treasury estimates from GTEM.

29 http://www.treasury.gov.au/lowpollutionfuture/report/table_listing.asp, p. 31, (accessed 4 October 2011).

30 http://www.treasury.gov.au/lowpollutionfuture/report/table_listing.asp, p. 116, (accessed 4 October 2011).

Table 2.5: China's emissions at present³¹**Table B17: Baseline global emissions****Emissions by region**

	2010 CO ₂ -e	2020 CO ₂ -e	2050 CO ₂ -e
United States	6.9	6.9	8.2
European Union (25)	4.7	4.5	4.7
China	10.3	17.9	31.0
Former Soviet Union	3.9	4.6	6.2
Japan	1.3	1.2	1.0
India	2.2	3.5	12.6
Canada	0.8	0.8	1.0
Indonesia	0.9	1.0	2.4
South Africa	0.5	0.6	1.2
Other South and East Asia	1.7	1.7	3.1
OPEC	2.1	2.7	5.6
Rest of world	7.8	9.0	16.1
World	43.5	55.0	94.3

Emissions by gas and type

	2010 CO ₂ -e	2020 CO ₂ -e	2050 CO ₂ -e
Carbon dioxide	34.4	43.5	77.1
Combustion	30.6	39.7	70.9
Fugitive/Industrial process	1.5	2.4	5.7
Waste	0.04	0.04	0.04
LUCF	2.2	1.4	0.5
Methane	5.9	7.4	10.6
Combustion	0.5	0.6	0.9
Fugitive/Industrial process	4.1	5.3	7.9
Waste	1.3	1.5	1.8
Nitrous oxide	2.7	3.4	5.3
Combustion	1.6	2.0	3.0
Fugitive/Industrial process	1.0	1.3	2.2
Waste	0.03	0.03	0.04
Other gases	0.5	0.7	1.3
Total	43.5	55.0	94.3

Note: LUCF means land use change and forestry.
Source: Treasury estimates from GTEM.

Table 2.6: Treasury's expectation of China's emissions in 2020³²**Table 3.9: Regional emissions**

	2020		2050	
	Medium global action	Ambitious global action	Medium global action	Ambitious global action
	per cent change from 2001		per cent change from 2001	
United States	-23	-36	-64	-94
European Union (25)	-24	-32	-59	-79
China	171	122	103	41
Former Soviet Union	13	-8	-58	-88
Japan	-18	-25	-56	-72
India	47	24	181	62
Canada	-8	-20	-46	-66
Indonesia	-17	-24	-18	-61
South Africa	9	-9	-8	-58
Other South and East Asia	-43	-55	-105	-152
OPEC	41	24	92	-25
Rest of world	22	15	14	-34
World average	22	5	-4	-49

Source: Treasury estimates from GTEM.

2.29 An increase of 1.8 billion tonnes of carbon dioxide emissions in China for 2020 alone is more than three times the amount of carbon dioxide emissions Australia

³¹http://www.treasury.gov.au/carbonpricemodelling/content/report/downloads/Modelling_Report_Consolidated_update.pdf, p. 164, (accessed 4 October 2011).

³²http://www.treasury.gov.au/carbonpricemodelling/content/report/downloads/Modelling_Report_Consolidated_update.pdf, p. 45, (accessed 4 October 2011).

generates in a whole year. Australia emitted 565 million tonnes of carbon pollution in 2009, the last year with available figures.³³

2.30 Taking the matter of India further, it has an emission intensity based scheme, while Australia has a scheme that is expressed as a target of emissions. While different countries are pursuing different approaches comparing them can lead to confusion:

CHAIR: What assumptions has Treasury made in this modelling about the level of abatement in India up to 2020?

Ms Quinn: To 2020, we have also taken their pledges on board. There are two elements here: the pledges they have on the table but also what might happen within their jurisdictions as a result of the opportunity to sell offsets. It is the case at the moment, for instance, that international companies are creating offsets through the international market and providing those abatements to other countries. There is a difference between the amount of emissions reductions happening within a country and the amount that a country gets to own, in a sense, in relation to any international action.

CHAIR: But if I look at chart 3.1 [of the initial treasury modelling released on 10 July 2011] and at the footnote, it says that India's mitigation to 2020 will be zero.

Ms Quinn: Footnote to chart 3.1—

CHAIR: So India does not appear on the chart because its emissions mitigation is zero compared to the baseline.

Ms Quinn: That is the international action assumptions. The government has got a reduction in emissions intensity and therefore the translation of their pledge is that they will reduce emissions but reduce emissions relative to the baseline.

CHAIR: But its emissions mitigation is zero compared to the baseline.

Ms Quinn: That is right.

CHAIR: So, when the Treasurer talks about how India is doing all these things to reduce emissions, they are not actually reducing emissions; they are continuing to—

Ms Quinn: They are reducing their emissions intensity compared to today. They are reducing the intensity of their economy, which is what their pledge is framed around.

CHAIR: I am just quoting your document—

Ms Quinn: And I am explaining it. They have got an emissions intensity target rather than an absolute emissions reduction. So, if their economy

33 Australian Government, *Clean Energy Future – Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 11.

were to double—they make the point that they have got a very low income per capita, so they have got an intensity based target.

CHAIR: I totally understand the argument. The point is that the government, in the way they are presenting some of the information, are comparing apples with pears and, when you question them about the pears, they try to compare them with the apples again. This is just another example of that.

Ms Quinn: I can just explain the analysis. The characterisation you put forward was not accurate, so I was correcting that.

CHAIR: But emissions reduction and reductions in emissions intensity are not the same thing. You would agree with that?

Ms Quinn: That is correct.³⁴

2.31 The issue of India's attempts at mitigation were further explored in the context of the Joint Parliamentary inquiry into the Clean Energy Future Legislation.

Senator CORMANN: Does Treasury assume that India has already taken strong national action on climate change, as is asserted by the Department of Climate Change and Energy Efficiency in its fact sheets, which were launched by the Prime Minister?

Ms Quinn: For all the countries, we have modelled the pledges that they have put on the table through international negotiations.

Senator CORMANN: But in the footnote to chart 3.1, it says that India does not appear on the left-hand side chart because its emissions mitigation is zero compared to the baseline—that is, you do not expect any further mitigation. How is that consistent?

Ms Quinn: There are two different things here. This is looking at the share of mitigation in terms of the targets put on the table for the Cancun and Copenhagen pledge process. It does not capture the actual reduction in emissions within their borders. What is happening in this analysis is that India's agreement on the table is an emissions intensity target, but they are also contributing to reductions in global emissions through the Clean Development Mechanism. So this chart looks at their pledges, which is what they might be accountable for in any international arrangements. It does not capture the actual reductions in emissions within the Indian economy, which is what is important for the global mitigation effort.³⁵

2.32 As indicated by this evasive Treasury response, the Department does not appear to endorse the view that strong action is being taken by India to achieve

34 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, General Manager, Macroeconomic Group, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 18.

35 Ms Meghan Quinn, Department of the Treasury, House of Representatives Joint Select Committee on Australia's Clean Energy Future Legislation, *Proof Committee Hansard*, 26 September 2011, p. 6.

emissions reductions and tackle climate change. This should not be surprising given that the Indian Environment Minister, Jairam Ramesh, said in 2009 that:

India will not accept any emission-reduction target – period. This is a non-negotiable stand.³⁶

2.33 An analysis of emissions reduction targets compared to the business as usual scenario was conducted by an American organisation, the Institute for 21st Century Energy. It noted similar results:

Table 2.7: Estimated gross greenhouse gas emissions in 2020, historical emissions, and projected business as usual emissions in 2020 (excluding land use and forestry) (million metric tons CO₂ eq.)³⁷

Country/ Region	2020 Emissions with minimum reduction	2020 Emissions with maximum reduction	1990 Baseline	2005 Baseline	2020 BAU (business as usual) Baseline
Australia	470	371	416	525	727
Canada	607	607	592	731	937
European Union*	4,451	3,895	5,564	5,108	5,210
Japan	952	952	1,270	1,358	1,170
New Zealand	56	49	62	77	87
Russian Federation	2,821	2,489	3,319	2,118	2,410
USA	5,878	5,878	6,084	7,082	7,492
Brazil	2,180	2,100	1,200	1,860	2,480
China	12,450	11,590	3,910	7,530	12,880
India	4,290	4,080	1,580	2,390	3,650
Indonesia	860	680	620	860	1,320
Republic of Korea	570	640	290	594	813

2.34 The US Energy Information Administration table (Table 2.7) shows that three of the largest emitters of carbon dioxide – Russia, China and India – have 2020 targets that are greater than their projected emissions if they took no policy action to reduce their emissions. That is, the targets that Russia, China and India have set do not require them to take any action to reduce emissions in their economy.

2.35 For instance, for Russia, its minimum emission reduction in 2020 is 2,821 million metric tonnes, while its business as usual baseline is 2,410 million metric tonnes. In the case of China, its minimum reduction target is 12,450 but its 2020 business as usual emission is 12,880 million metric tonnes. In respect of India, its

36 Bloomberg, 'India Rejects Any Greenhouse-Gas Cuts Under New Climate Treaty', 30 June 2009, <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aWs0Pts2Kxes>

37 Source: Institute for 21st Century Energy, *Copenhagen Accord by-the-Numbers*, p. 7, <http://www.energyxxi.org/reports/CopenhagenAccordbytheNumbers.pdf> (accessed 28 September 2011).

minimum emission reduction target for 2020 of 4,290 million metric tonnes while is business as usual 2020 emissions are 3,650 million metric tonnes.

2.36 Indeed, if these numbers were a true target, not a ceiling, Russia, China and India, would need to subsidise the emission of carbon dioxide to meet them. Together, Russia, China and India represent 35 per cent of the world's carbon dioxide emissions.³⁸

2.37 One of two things can be concluded from these figures. Either Russia, China and India do not intend to take action to reduce their emissions or any action they will take will not result in an overall reduction in world carbon dioxide levels.

2.38 It is worth exploring what China will do in the future given its economic size and its emissions potential:

The facts on China are simple and irrefutable. It has a coal-fired system equal to more than 13 times our entire electricity generation. Between now and 2020, it is going to add between 400GW and 500GW to its existing 670GW of coal-fired power generation.

That's its projections. And that's net. So if they close, say, 200GW of really dirty old stations, they will be building 600GW to 700GW of new ones, all pumping out carbon dioxide, if hopefully not also grit.

Total power generation in Australia is about 50GW.

Yes, China might be aiming for 150GW of wind and 20GW of solar by 2020. But that's installed capacity. When the wind don't . . . and the sun don't . . . Real capacity of the two combined will be closer to 50GW by 2020, as against an extra 400GW at least of additional coal-fired generation.

Despite those clean coal-fired stations that exist only in the deeper and increasingly darker recesses of Garnaut's mind, by 2020 China will be emitting something like 25 times the entire emissions of Australia today. Rendering utterly ineffective the 5 per cent cut we will purport to achieve at such huge and permanent cost.³⁹

2.39 More importantly for any consideration of the government's carbon tax, these analyses call into question Treasury's decision to assume, for the purposes of its modelling, that countries will meet their carbon reduction pledges. The assumptions made by the Treasury in its modelling, including international action on carbon reduction pledges, are examined in greater detail in Chapter 10.

38 Institute for 21st Century Energy, *Copenhagen Accord by-the-Numbers*, p. 3, <http://www.energyxxi.org/reports/CopenhagenAccordbytheNumbers.pdf> (accessed 28 September 2011).

39 Terry McCrann, 'Why we should be afraid – very afraid- of Julia Gillard's fantasies, The Australian, <http://www.theaustralian.com.au/business/opinion/why-we-should-be-afraid-very-afraid-of-julia-gillards-fantasies/story-e6frg9if-1226024297693> (accessed 3 October 2011).

2.40 Furthermore, in the United States, seven states including Arizona, California, Montana, New Mexico, Oregon, Washington and Utah were implementing a regional emissions trading scheme, but it now seems that only California remains officially committed to implementing one next year.

2.41 New Jersey and New Hampshire had regional greenhouse gas initiatives in place and are now in the process of abandoning those schemes.

2.42 The Chicago Climate Exchange wound down in late 2010.⁴⁰

2.43 A robust and effective international scheme is essential to the operation of the government's scheme. Around \$650 billion worth of permits will be needed to be purchased from overseas to enable Australia to meet its emission reduction targets.

2.44 Specifically:

The \$650 billion that captures both the Government's insanity and Treasury's disgrace is the rough amount that Australian emitters will pay for foreign CO₂ permits, between 2020 and 2050, indicated by the Treasury modelling.

The critical question is WHY does Treasury factor in these foreign permits? Why won't we just cut our emissions in line with the local permits issued by the Government?

Because the foreign permits are critical to squaring the insane circle. Without them, the emission cut targets would be literally impossible.

To cut by "just" 5 per cent by 2020 - just, it's important to note, nine years away - we have to actually cut by something like 25 per cent from our present emission levels as against the 2000 reference point.

To get all those cuts domestically would be to run a chainsaw through the Australian economy. We would have to close power stations and literally turn off the lights.

So Treasury's model felicitously comes up with the conclusion that we will cut our emissions by only 58 million tonnes by 2020. We'll buy permits from foreigners covering the bigger portion of 94 million tonnes.⁴¹

No harmonised global climate change mitigation action scheme

2.45 The earlier section of the report highlighted some of the limited efforts being taken by Australia's international counterparts to tackle climate change. This next section of the report explores the issue in more details and highlights the lack of

40 Ed Barnes, 'Collapse of Chicago Climate Exchange means a strategy shift on global warming curbs', *Foxnews.com*, <http://www.foxnews.com/politics/2010/11/09/collapse-chicago-climate-exchange-means-strategy-shift-global-warming-curbs/> (accessed 3 October 2011).

41 Terry McCrann, 'Carbon dioxide insanity continues', *The Herald Sun*, <http://www.heraldsun.com.au/business/terry-mccranns-column/carbon-dioxide-insanity-continues/story-e6frfig6-1226122415509> (accessed 3 October 2011).

coordinated global action to tackle climate despite claims being made to the contrary about coordinated global action.

2.46 The assumptions that underpin the government position and the carbon tax are as follows:

CHAIR: ...Your assumptions have been criticised, as they appear to assume that many countries that do not currently impose a carbon price and that are not showing any signs of implementing one are assumed to change their minds by 2016. Can you give us some detail on your assumptions as to what action you believe the US, Canada, Japan, China, South Korea, Brazil, South Africa and India will take by 2016?

Ms Quinn: The analysis we have undertaken relating to international action on climate change indicates that countries that have made pledges at either Cancun or Copenhagen conventions through the UNFCCC process implement policies to achieve those pledges. For example, the United States has pledged to reduce its emissions by 17 per cent of its 1990 levels by 2020, and that is the assumption that we have modelled in the 550 parts per million scenario. Where countries have identified a range in their pledges, we have taken the low-end pledges over the period to 2020. They are the international action assumptions that are embodied in the modelling.

For the more ambitious international action, we have assumed that countries have to achieve the highest of their pledges between now and 2016 and then countries have to take greater action than is currently on the table, because there is a mismatch between the pledges that are currently on the table and the stated agreement or aim of parties to the UNFCCC of achieving a two degrees or less warming of the world. There is a bit of an inconsistency at the moment between those two pledges.⁴²

2.47 While the Treasury suggested that general catch-all assumptions are appropriate for its modelling, a look at the actual level of past and current commitment by countries to tackling climate change is instructive and puts the Treasury view in a very different context:

CHAIR: Canada recently had an election where the Harper government was re-elected on a specific pledge of no carbon tax. What are your Canada assumptions?

Ms Quinn: It is also the case that British Columbia has a carbon tax in place, which is a significant proportion of the Canadian economy, and it is set at higher than the Australian rate.

CHAIR: Are you extrapolating the British Columbia circumstance across the whole of the Canadian economy?

42 Senator Mathias Cormann, Chair Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 14.

Ms Quinn: No, I am simply saying that you made the observation that, at a federal level, there was a change in policy frameworks but, at a provincial level, that has not been the case, so you have to—

CHAIR: You have not adjusted your assumptions around Canada as a result of—

Ms Quinn: The Canadian government has still maintained its commitment to achieve its pledge of similar reductions to the United States, and so we take governments at their word when they make international pledges and pledges to their electorates that those reductions will be achieved.

CHAIR: Has the US met Kyoto targets in the past?

Ms Quinn: As you know, the United States was not a signatory to the Kyoto protocol, and there has been significant abatement activity in the United States through various mechanisms.

CHAIR: Have they met the theoretical Kyoto targets?

Ms Quinn: They have not met the Kyoto targets.

CHAIR: Has Canada met the Kyoto targets?

Ms Quinn: No, Canada has not met the Kyoto targets either.⁴³

2.48 The evidence provided to the committee appears contradictory and unstable, especially when it is considered that it has formed the basis of a policy that is intended to reshape the Australian economy.

2.49 In the context of the differing approaches being undertaken overseas, a variety of approaches can be deployed to tackle climate change. Australia has chosen the carbon tax route but the United States has taken the direct action path: This naturally raises the question about the efficacy of the carbon tax itself:

CHAIR: Lenore Taylor wrote in a recent article—and I think this is similar to what you just said:

The government says it is not assuming countries such as the US actually have an emissions trading scheme, but rather that they would try to reach their emission reduction targets at a cost no higher than the international price.

Do you agree with that?

Ms Quinn: Yes.

CHAIR: That is what Treasury is assuming? That is a fair reflection of your assumption?

Ms Quinn: What we are assuming is that there are mechanisms in countries to achieve emissions that result in an implicit or explicit carbon price based on those economies. It does not mean it specifically has to be an emissions

43 Senator Mathias Cormann, Chair Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 15.

trading scheme within all countries. It is the case that we are assuming that there is a continuation of the international offset market which exists now in order for Australia to be able to purchase permits from overseas. So we are assuming that there is an arrangement, either through an international framework or through bilateral trades, such that Australian liable entities are able to purchase offsets overseas. That is not the same as saying that all countries have to sign up to an international binding agreement, and it would be inaccurate to make that statement.

CHAIR: Are you saying, then, that countries like the US can achieve abatement at a world price without a carbon tax?

Ms Quinn: The United States has an abundance of abatement opportunities. It is a relatively low-cost abatement country. It is our expectation that, at a prevailing world price we modelled, it would be able to sell abatement overseas. Therefore, we do believe it is possible for the United States to achieve abatement within its own borders at below the international prices that we modelled.

CHAIR: So abatement in the US would be comparatively cheaper than abatement in Australia?

Ms Quinn: On average, that is what our modelling finds, yes.

CHAIR: So on average abatement in the US would be cheaper than in Australia, yet we think that Australia has to go ahead of the US in its effort.⁴⁴

2.50 The modelling places great weight on coordinated global action and makes great assumptions about a range of countries:

Senator CORMANN: ... In the medium global action scenario Treasury assumes that OPEC countries enter coordinated global action on carbon pricing from 2021—that is, that they are effectively going to have ETSs in place. Look at the second paragraph below table 3.1 of the main modelling document. How plausible is it really that countries like Iran, Qatar, Saudi Arabia, Venezuela, Syria and Yemen will have operational and internationally linked ETSs within 10 years?

Ms Quinn: The assumption does not rely on the characterisation that you have just put on the table. The assumption—once again, it is the same for the United States and all other countries—is that they have got some mechanism for putting an implicit or explicit price on carbon. Some of the countries you have just mentioned are already part of the Clean Development Mechanism. They are already contributing to emissions reductions at a global level through that mechanism, which is an international trading arrangement where countries can purchase abatement from overseas or sell abatement to overseas. So given that some of those countries in the OPEC region are already within that scheme it seems plausible that that scheme could expand over time, given appropriate

44 Senator Mathias Cormann, Chair Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 15.

regulatory frameworks, to bring all countries into a global pricing mechanism.

Senator CORMANN: Except that your modelling in table 3.7 shows that even for the medium global action scenario the GDP per person cost for OPEC countries will be around eight per cent in 2050, which is more than 20 times the estimated cost for the US or the EU. Given that, how can you be so confident that countries like Qatar and Saudi Arabia—or, for that matter, China and India, where the GDP per person costs in 2050 are projected to be over 10 times as large as in the US and Europe—will choose to join globally coordinated action on carbon pricing by 2021?

Ms Quinn: It is a global issue that needs a global solution and so the expectation is that, over time, countries will play a role, depending on their view of timing et cetera. So it is the case that some countries are going to face higher economic costs relative to what they otherwise would experience.⁴⁵

2.51 The Treasury assumptions do not appear to be supported when questioned.

2.52 The effectiveness of other countries undertaking effective climate change action is central and integral to the efficacy of the Treasury modelling of the carbon tax. As outlined in this chapter, various assumptions about the conduct of other countries are heroic. To further illustrate this point, consider the action to be taken by the economic bloc known as the Organisation of Petroleum Exporting Countries (OPEC). While this organisation is well known for its cartel arrangements with respect to petroleum, it is an important bloc in the context of Treasury's climate change modelling:

Senator CORMANN: We were talking about the action taken by countries like Iran, Syria and Venezuela in your assumptions then. Looking at table 3.8, it says that by 2050 Treasury is expecting that the OPEC bloc will be purchasing 1.5 billion tonnes of abatement per year from other countries, which is far more than the US, Europe and Japan combined. Does it seem plausible to Treasury that this is what countries like Iran, Syria and Venezuela will be doing—collectively spending around US\$150 billion a year, in real 2010 US dollars, to buy carbon credits from other nations?

Ms Quinn: The modelling we have undertaken is to achieve an environmental target. You are talking about a 550 parts per million scenario. To 2020 we have modelled the pledges that countries have put on the table through the international negotiations. After that we have looked at a scheme where countries make the same emission reductions as each other relative to their 'business as usual' path. So the analysis is that OPEC would reduce its emissions relative to its business as usual path by the same amount as Australia. That is the allocation framework. It is a combination of the carbon price and what countries find efficient to do within their

45 Ms Meghan Quinn, Department of the Treasury, House of Representatives Joint Select Committee on Australia's Clean Energy Future Legislation, *Joint Committee Hansard*, 26 September 2011, p. 6.

borders, and then the allocation that results in how much they purchase from overseas. It is entirely plausible, at the carbon prices that we are looking at, given the comparative advantage of the OPEC nations in producing oil and gas, that they may well find it profitable to continue to produce oil and gas while achieving their allocated abatement by sourcing abatement from other countries.⁴⁶

2.53 In addition to there being legitimate questions about the future efficacy of actions by China, India, Russia and OPEC, there are also legitimate questions being asked about the rest of the world:

Senator CORMANN: I want to go a bit further down that same table, 3.8, and question the plausibility of Treasury assumptions. That table also says that, under the medium global action scenario, by 2020 the 'rest of the world' bloc will be purchasing more than 800 million tonnes of CO₂ abatement per annum from other countries—more than the total abatement being purchased that year by the US, Europe, Japan and Canada combined. How can it be considered plausible? By a process of elimination, the rest of the world includes countries like PNG, Somalia, Malawi, Pakistan, Mongolia and others. Do you really see those countries purchasing more than Europe, the US, Japan and Canada combined on an international market by 2020?

Ms Quinn: I would be happy to take that question on notice and provide you the breakdown of countries that are in the rest of the world, but it is certainly more than just the very poor nations. There are countries in there such as Brazil and other members of the G20. I would certainly be happy to take that question on notice.⁴⁷

2.54 At the time of finalising this report, Treasury had still not provided a reply to the question taken on notice.

2.55 Another important bloc of countries covers the south and east Asia region. In this part of the world, Treasury has once again made some heroic assumptions about what can be done:

Senator CORMANN: In the same vein, let us go to table 3.9, where the Treasury modelling envisages that the bloc of 'other south and east Asia' will reduce its emissions by around twice as much by 2020 in percentage terms from 2001 levels as either the US or the EU. That bloc consists of Brunei, Cambodia, Laos, Malaysia, the Maldives, the Philippines, Korea, Singapore, Thailand, East Timor and Vietnam. How plausible does that

46 Ms Meghan Quinn, Department of the Treasury, House of Representatives Joint Select Committee on Australia's Clean Energy Future Legislation, *Proof Committee Hansard*, 26 September 2011, p. 9.

47 Ms Meghan Quinn, Department of the Treasury, House of Representatives Joint Select Committee on Australia's Clean Energy Future Legislation, *Proof Committee Hansard*, 26 September 2011, p. 9.

seem, and can you tell us where this bloc's emissions stand currently, at the halfway mark between 2001 and 2020?

Ms Quinn: Most of the emission reductions in that bloc occur through land use change and forestry analysis, and that information was provided by the Berkeley laboratory of analysis in the United States, using their global land use change and forestry analysis. So it is the case that a very reputable international organisation used by many other international organisations has provided that information. They have looked at the detailed availability of abatement in those countries from the land use change and forestry sector, and that is what we have incorporated into the analysis. Most people looking at international abatement opportunities recognise the potential for fairly low-cost abatement through land use change and forestry mechanisms. The other elements of your question I am happy to take on notice.⁴⁸

2.56 At the time of finalising this report, Treasury had not provided a reply to the question taken on notice.

Pessimism over future prospects for a binding international agreement

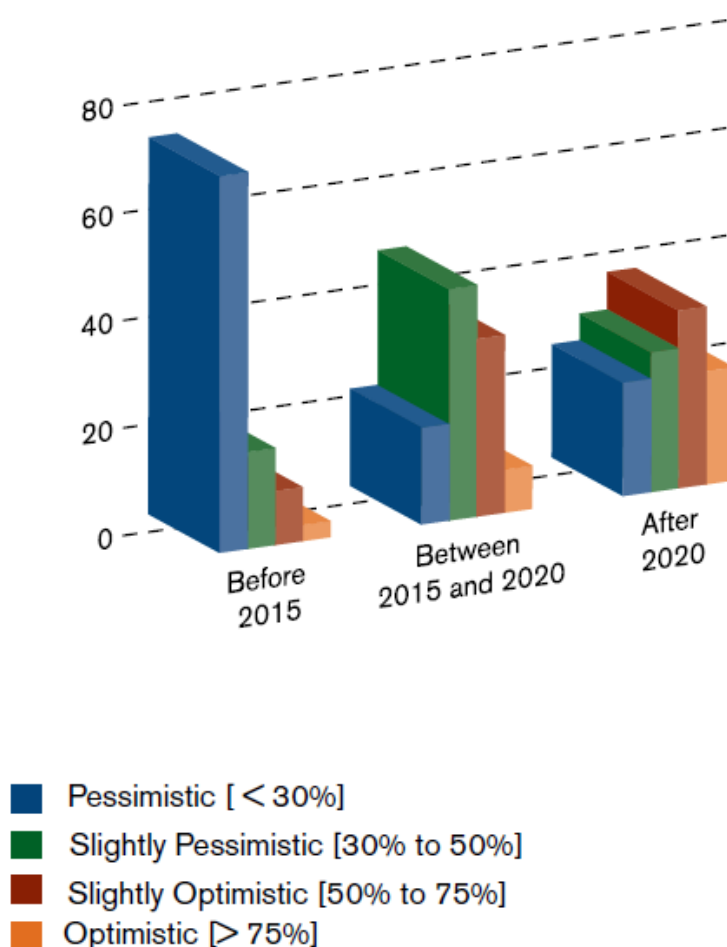
2.57 At the heart of international negotiations on climate change responses, there is a fundamental gap between the views of developed and developing countries. Developed countries believe that any Kyoto successor agreement must extend legally binding reductions, from the business as usual case, for developing countries. Whereas developing countries want the Kyoto arrangements to continue, whereby legally binding reductions in emissions are imposed on developed, but not developing, countries. The evidence presented above on the increasing importance of carbon emissions in China and India demonstrate that no tangible reductions in global emissions can be achieved without those major emitters being part of a global binding framework.

2.58 It is not surprising then that a World Bank survey of participants in carbon trading markets are sceptical about any new legally binding agreement soon. Indeed, according to this survey, released in June 2011, less than 50 per cent of participants are confident that there will be a legally binding agreement in place before 2020 (see Graphic 2.7 below)–

48 Senator Mathias Cormann. Member, House of Representatives Joint Select Committee on Australia's Clean Energy Future Legislation, and Ms Meghan Quinn, Department of the Treasury, *Proof Committee Hansard*, 26 September 2011, p. 9.

Graphic 2.7: Levels of confidence concerning success of Kyoto⁴⁹

How confident are you that there will be a new legally-binding multilateral framework, similar to the current Kyoto Protocol, with legally-binding commitments to reduce emissions, underpinned by relatively strong multilateral rules and institutions?



2.59 These views would appear to be inconsistent with the assumptions made in Treasury's modelling which assumes that large cuts in carbon emissions are made in both developed and developing countries by 2020.

49 World Bank 2011, *State and Trends of the Carbon Market 2011*, Washington DC, May, p. 18.

The evolution of Australia's recent climate change policy

The Carbon Pollution Reduction Scheme

2.60 On 30 September 2008, Professor Ross Garnaut presented the *Garnaut Climate Change Review: Final Report*, which was commissioned by the then federal Australian Labor Party (ALP) opposition and ALP state and territory governments in 2007. The review was undertaken to investigate the likely economic and environmental impact of climate change and possible strategies to cut greenhouse gas emissions.⁵⁰

2.61 The Department of the Treasury modelling report, *Australia's Low Pollution Future: The Economics of Climate Change Mitigation*, was released on 30 October 2008. It explored the possible impacts of policies to cut domestic greenhouse gas emissions on the Australian economy.⁵¹

2.62 On 12 February 2009, the Treasurer, the Hon. Wayne Swan MP, asked the House of Representatives Standing Committee on Economics to inquire into 'the choice of an emissions trading scheme as the central policy to reduce Australia's carbon pollution'. The inquiry was cancelled a week later by the Treasurer.⁵²

2.63 On 10 March 2009, the Australian Government released the exposure draft of the Carbon Pollution Reduction Scheme Bill 2009 and associated legislation. The exposure draft of the Bill was referred to the Senate Standing Committee on Economics on 11 March 2009 for inquiry. The committee report was presented on 16 April 2009.

2.64 Shortly after the release of the exposure draft of the Bill, the then Prime Minister, the Hon. Kevin Rudd MP, announced some additional changes to the proposed Carbon Pollution Reduction Scheme (CPRS). The changes included a one year delay in the implementation of the CPRS, a one year fixed price period and a revised 25 per cent emissions reduction target by 2020 'if the world agrees to an ambitious global deal to stabilise levels of CO₂ equivalent at 450 parts per million or lower'.⁵³

50 Senate Select Committee on the Scrutiny of New Taxes, Fuel and Energy, *The CPRS: Economic cost without environmental benefit*, Interim Report (May 2009), p. 7.

51 Senate Select Committee on the Scrutiny of New Taxes, Fuel and Energy, *The CPRS: Economic cost without environmental benefit*, Interim Report (May 2009), p. 7.

52 Senate Select Committee on the Scrutiny of New Taxes, Fuel and Energy, *The CPRS: Economic cost without environmental benefit*, Interim Report (May 2009), p. 7.

53 Australian Labor Party, *A new target for reducing Australia's carbon pollution*, media statement, 4 May 2009.

2.65 Legislation to implement the CPRS from 2011 was rejected in the Australian Senate twice, on 13 August and 2 December 2009.⁵⁴ The legislation was re-introduced into Parliament with amendments on 2 February 2010. On 27 April 2010, Mr Rudd announced that implementation of the CPRS would be deferred.⁵⁵

2.66 On 17 July 2010, the Prime Minister, the Hon. Julia Gillard MP, called an election for the Commonwealth Parliament. On 16 August 2010, during the election campaign, the Prime Minister made the following commitment:

There will be no carbon tax under the government I lead.⁵⁶

2.67 The Prime Minister made further comments ruling out a carbon tax:

There will be no carbon tax under the Government I lead.⁵⁷

I rule out a carbon tax.⁵⁸

2.68 The Deputy Prime Minister and Treasurer made comments ruling out a carbon tax:

We have made our position very clear. We have ruled it out.⁵⁹

JOURNALIST: Can you tell us exactly when Labor will apply a price to carbon?

WAYNE SWAN: Well, certainly what we rejected is this hysterical allegation somehow that we are moving towards a carbon tax...we certainly reject that.⁶⁰

54 Department of Climate Change, *Carbon Pollution Reduction Scheme*, <http://www.climatechange.gov.au/government/initiatives/cprs.aspx> (accessed 6 June 2011) and Department of Climate Change, *CPRS Progress*, <http://www.climatechange.gov.au/government/initiatives/cprs/cprs-progress.aspx> (accessed 6 June 2011).

55 Department of Climate Change, *Carbon Pollution Reduction Scheme*, <http://www.climatechange.gov.au/government/initiatives/cprs.aspx> (accessed 6 June 2011) and Department of Climate Change, *CPRS Progress*, <http://www.climatechange.gov.au/government/initiatives/cprs/cprs-progress.aspx> (accessed 6 June 2011).

56 ABC News, *Julia Gillard's year in quotes*, <http://www.abc.net.au/news/stories/2011/06/24/3252198.htm> (accessed 7 June 2011).

57 The Hon. Julia Gillard MP, Prime Minister, Channel Ten News, 16 August 2010, <http://www.theaustralian.com.au/national-affairs/julia-gillards-carbon-price-promise/story-fn59niix-1225907522983> (accessed 5 October 2011).

58 Paul Kelly and Dennis Shanahan, 'Julia Gillard's carbon price promise', *The Australian*, 20 August 2010.

59 The Hon. Wayne Swan MP, Treasurer, *7:30 Report*, ABC, 12 August 2010.

60 The Hon. Wayne Swan MP, Treasurer, *Meet the Press*, Channel Ten, 15 August 2010.

The carbon tax

2.69 Following the 2010 Commonwealth Election, the returned Labor Government to put a price on carbon, a tax, even though the ruled one out before the election.

2.70 On 27 September 2010, the Prime Minister, the Hon. Julia Gillard MP, the Deputy Prime Minister and Treasurer, the Hon. Wayne Swan MP and the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, announced the establishment of the Multi-Party Climate Change Committee (MPCCC). The MPCCC's terms of reference are at Appendix 3. The Opposition declined an offer of membership to the MPCCC.

2.71 Table 2.8 lists the membership of the MPCCC:

Table 2.8: Membership of the Multi-party Climate Change Committee⁶¹

The Hon. Julia Gillard MP	Prime Minister	Chair
The Hon. Wayne Swan MP	Deputy Prime Minister	
The Hon. Greg Combet AM MP	Minister for Climate Change and Energy Efficiency	Co-Deputy Chair
Senator Bob Brown	Leader, Australian Greens (Tasmania)	
Senator Christine Milne	Deputy Leader, Australian Greens (Tasmania)	Co-Deputy Chair
Mr Tony Windsor MP	Independent (Member for New England)	
Mr Rob Oakeshott MP	Independent (Member for Lyne)	

2.72 The Committee was advised by a panel of four independent experts - Professor Ross Garnaut, Professor Will Steffen, Mr Rod Sims and Ms Patricia Faulkner.⁶²

2.73 On 27 September 2010, the government also announced that it would establish two roundtables to advise it on climate change reform. The two roundtables

61 The Multi-Party Climate Change Committee held its first meeting on Thursday, 7 October 2010 in Canberra.

62 Department of Climate Change, *Multi-party Climate Change Committee*, <http://www.climatechange.gov.au/media/whats-new/climate-change-committee.aspx> (accessed 6 June 2011).

are the Business Roundtable and the Environment and Non-Governmental Organisation Roundtable.⁶³

2.74 On 28 April 2011, the Department of Climate Change and Energy Efficiency called for submissions to assist the work of the MPCCC. Submissions closed on 10 May 2011.⁶⁴

Carbon tax

2.75 Prior to the 2010 election, the Prime Minister, the Hon Julia Gillard MP, declared that “there will be no carbon tax under a Government I lead’. On 24 February 2011, the Prime Minister, reversed this promise and announced what her government's intentions were in relation to tackling climate change:

... the Government’s plan (is) to cut pollution, tackle climate change and deliver the economic reform Australia needs to move to a clean energy future.

This is an essential economic reform, and it is the right thing to do.

The two-stage plan for a carbon price mechanism will start with a fixed price period [a carbon tax] for three to five years before transitioning to an emissions trading scheme.

The Government will propose that the carbon price commences on 1 July 2012, subject to the ability to negotiate agreement with a majority in both houses of Parliament and pass legislation this year.⁶⁵

The architecture of the carbon tax

2.76 On the 24 February 2011, the MPCCC released the 'Carbon Price Mechanism' document. It set out:

... a proposed carbon price mechanism that has been discussed by members of the Multi-Party Climate Change Committee (MPCCC). The proposal has been agreed by the Government and Greens members of the Committee.

63 Joint media release, The Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer; the Hon. Martin Ferguson AM MP, Minister for Resources and Energy; the Hon. Tony Burke MP, Minister for Sustainability, Environment, Water, Population & Communities; Senator the Hon. Joe Ludwig, Minister for Agriculture, Fisheries and Forestry, *Government to seek business, environment and non-Government organisations' views on climate change*, 27 September 2010 <http://www.climatechange.gov.au/minister/greg-combet/2010/media-releases/September/mr20100927a.aspx> (accessed 6 July 2011).

64 Department of Climate Change, *Consultation on carbon pricing mechanism*, <http://www.climatechange.gov.au/media/whats-new/consultation-carbon-pricing.aspx> (accessed 6 June 2011).

65 Joint media release, the Hon. Julia Gillard MP, Prime Minister and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, *Climate change framework announced*, <http://www.pm.gov.au/press-office/climate-change-framework-announced> (accessed 7 July 2011).

Mr Windsor and Mr Oakeshott have agreed that the proposal be released to enable consideration by the community and to demonstrate the progress that has been made.⁶⁶

2.77 The details surrounding the cost, impact, scope and operation of the carbon tax were not disclosed at the time of the government's announcement that it would seek to introduce a carbon tax despite emphatic promises before the election not to.

2.78 The 'Carbon Price Mechanism' document outlined some of the known features of the government's proposed carbon tax and emissions trading scheme. Given the absence of detail surrounding the operation of the proposed scheme, the known features were crucial for stakeholders in terms of their engagement with the policy development process and critical for the Senate in its role as a house of review.

2.79 The little information that was available clearly showed that the government intended to shift consumer behaviour at a domestic and commercial level by substantially increasing the cost of electricity.

2.80 According to the 'Carbon Pricing Mechanism' document, the known features of the government's carbon tax were to be:

Start date

The mechanism could commence as early as 1 July 2012, subject to the ability to negotiate agreement with a majority in both houses of Parliament and pass legislation this year.

Length of fixed price period

The fixed price phase could be of between three and five years, with the price increasing annually at a pre-determined rate. The initial fixed price could begin to drive economic transformation and investment in low emission technologies, and ensure greenhouse gas emission reductions.

Transition arrangements

At the end of the fixed price period, the clear intent would be that the scheme convert to a flexible price cap-and-trade emissions trading scheme. In relation to the transition to a flexible price, it would be important to design the arrangements so as to promote business certainty and a smooth transition from the fixed to flexible price.

...

66 Multi-Party Climate Change Committee, *Carbon Price Mechanism*, 24 February 2011, (<http://www.climatechange.gov.au/en/government/initiatives/~media/publications/mpccc/mpcc-c-carbon-price-mechanism.pdf>) (accessed 31 May 2011).

Coverage

A carbon price mechanism could cover all six greenhouse gases counted under the Kyoto Protocol and have broad coverage of other emissions sources encompassing:

- the stationary energy sector
- transport sector
- industrial processes sector
- fugitive emissions (other than from decommissioned coal mines)
- emissions from non-legacy waste.

Emissions from sources covered under the proposed Carbon Farming Initiative, such as agricultural emissions sources, would be excluded from coverage under the carbon pricing mechanism.

...

International linking

During the fixed price phase, liable parties may not be entitled to use international emissions units for compliance.

In the flexible price phase, international emissions units (offsets) meeting appropriate criteria concerning their quality could be able to be used for compliance. In advance of a move to emissions trading, a decision could be made on any restrictions on the quantity and any other criteria for the use of international emission units.

Assistance and other matters still to be determined

Ways to promote the environmental effectiveness of the scheme, to support technological innovation, and ways to manage the impacts of the scheme on households, communities and business are to be developed

...

Further consideration could also be given to reviewing existing Commonwealth, State and Territory policies so that they are complementary to the mechanism. Such complementary measures may support research, development and commercialisation of clean technologies.⁶⁷

2.81 On 10 July 2011, the Prime Minister finally announced the key features, costs, scope, impact and operational features of the carbon tax. The key features of the carbon tax are set out in the next section of Chapter 2.

67 Multi-Party Climate Change Committee, *Carbon Price Mechanism*, 24 February 2011, (<http://www.climatechange.gov.au/en/government/initiatives/~media/publications/mpccc/mpcc-c-carbon-price-mechanism.pdf>) (accessed 31 May 2011).

The carbon tax legislation

2.82 On 28 July 2011, the Treasurer and Deputy Prime Minister, the Hon. Wayne Swan MP, and the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, jointly released the Clean Energy Legislation for public comment. Stakeholders were asked to put their views to government by 22 August 2011.⁶⁸

2.83 The submissions made to the Department of Climate Change and Energy Efficiency are not available on the agency's website. However, the Prime Minister, the Hon. Julia Gillard MP, has stated that 300 submissions were received.⁶⁹

2.84 On 13 September 2011, the Clean Energy Legislation Package was introduced into Parliament. The Joint Select Committee on Australia's Clean Energy Future Legislation was established under a resolution of appointment passed by the House of Representatives on 14 September 2011 and the Senate on 15 September 2011 to inquire into and report on the provisions of 19 Bills.⁷⁰

1. Clean Energy Bill 2011
2. Clean Energy (Consequential Amendments) Bill 2011
3. Clean Energy (Income Tax Rates Amendments) Bill 2011
4. Clean Energy (Household Assistance Amendments) Bill 2011
5. Clean Energy (Tax Laws Amendments) Bill 2011
6. Clean Energy (Fuel Tax Legislation Amendment) Bill 2011
7. Clean Energy (Customs Tariff Amendment) Bill 2011
8. Clean Energy (Excise Tariff Legislation Amendment) Bill 2011
9. Ozone Protection and Synthetic Greenhouse Gas (Manufacture Levy) Amendment Bill 2011
10. Ozone Protection and Synthetic Greenhouse Gas (Import Levy) Amendment Bill 2011
11. Clean Energy (Unit Shortfall Charge—General) Bill 2011
12. Clean Energy (Unit Issue Charge—Auctions) Bill 2011

68 Joint Media Release, the Treasurer and Deputy Prime Minister, the Hon Wayne Swan MP and with the Minister for Climate Change and Energy Efficiency, Hon Greg Combet AM MP, 'Clean Energy Future Draft Legislation Released', <http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2011/090.htm&pageID=003&min=wms&Year=&DocType=0> (accessed 19 September 2011).

69 The Hon Julia Gillard MP, Prime Minister, *House of Representatives Hansard*, 13 September 2011, p. 1.

70 Parliament of Australia, Joint Select Committee on Australia's Clean Energy Future Legislation: Inquiry into Australia's Clean Energy Future, <http://www.aph.gov.au/house/committee/jscacefl/index.htm> (accessed 19 September 2011).

13. Clean Energy (Unit Issue Charge—Fixed Charge) Bill 2011
14. Clean Energy (International Unit Surrender Charge) Bill 2011
15. Clean Energy (Charges—Customs) Bill 2011
16. Clean Energy (Charges—Excise) Bill 2011
17. Clean Energy Regulator Bill 2011
18. Climate Change Authority Bill 2011
19. Steel Transformation Plan Bill 2011

2.85 The Joint Select Committee on Australia's Clean Energy Future Legislation called for submissions by 22 September 2011, that is, seven days after the media release requesting submissions was issued.

2.86 The Joint Select Committee on Australia's Clean Energy Future Legislation will report on or before 7 October 2011.

2.87 The Clean Energy Bills so far released in either draft or final form have not included legislation covering the Australian Renewable Energy Agency or the Clean Energy Finance Corporation announced as part of the government's carbon tax package on 10 July 2011.⁷¹

Fallout from the carbon tax policy development process

2.88 The Senate Select Committee on the Scrutiny of New Taxes started on 30 September 2010. The committee conducted five public hearings on the carbon tax between March and June 2011. For a large part of the time of the committee's operation, insufficient detail was available for stakeholders to make comment on the proposed carbon tax.⁷² The detail was released on 10 July 2011.

2.89 The absence of detail has had an impact on the capacity of witnesses to provide evidence to the inquiry. For example, even the Treasury were unsure of the carbon tax rate:

CHAIR: Does Treasury know what the initial carbon tax price will be?

Dr Parkinson: That is a matter that the government and the Independents and the Greens, and the parliament more generally, will have to decide.⁷³

71 Combet, G. 2011, Legislating for Australia's Clean Energy Future, Media Release, 13 September, <http://climatechange.gov.au/minister/greg-combet/2011/media-releases/September/mr20110913A.aspx>

72 Mr David Harrison, General Manager, Advocacy, Chamber of Commerce and Industry Western Australia, *Committee Hansard*, 29 April 2011, p. 14.

73 Dr Martin Parkinson, Secretary to the Treasury, *Committee Hansard*, 24 March 2011, p. 7.

2.90 According to the National Farmers Federation the absence of detail is an issue:

We have pretty scant detail out there at the moment about that system.⁷⁴

2.91 The Association of Mining and Exploration Companies has also expressed frustration with the lack of information:

AMEC is not represented on that [Multi-Party Climate Change] Committee and is therefore not aware of any policy details or costing models and is therefore opposed to the introduction of a tax on carbon...⁷⁵

2.92 The Chamber of Commerce and Industry of Western Australia also expressed the view that the lack of detail regarding the government's position was not helpful:

The questions you are asking us are difficult to answer because it comes back to detail. We cannot at the moment assess or model the impact that the proposed carbon price will have on our members because we do not know what the environment, the parameters will be that will be faced. ... We still do not have that detail, so it is very difficult, almost impossible, for our members to plan and to ponder what implications it will have for them and what they can do to adjust their business operations when there are all those questions in the air.⁷⁶

2.93 The Magnetite Network made the point that:

Indeed, at the moment we are not sure of any of the detail of the proposed carbon tax. We have been told that it is \$20 per tonne, but who it applies to, what level of industry assistance there will be and what that will mean for the price of electricity we do not know. What it will mean for the purchase of gas for some of us who may have a combination of gas or solely gas we just do not know.⁷⁷

A need for Australians to have their say

2.94 Following the government's announcement of the details of its carbon plans, the committee resolved to conduct a further eight public hearing into the carbon tax. These hearings and the hearings that occurred prior to the announcement of the carbon tax form the basis of the evidence that underpins this report.

2.95 The carbon tax is one element of the government's overall Clean Energy Plan announced on 10 July 2011. The program covers a broad range of measures aside

74 Mr Charles McElhone, Chief Executive Officer, National Farmers Federation, *Committee Hansard*, 17 May 2011, p. 4.

75 Association of Mining and Exploration Companies, *Submission 20*, p. 1.

76 Mr Matthew Harrison, General Manager – Advocacy, Chamber of Commerce and Industry – Western Australia, *Committee Hansard*, 29 April 2011, p. 14.

77 Mr Bill McKenzie, Chairman, Magnetite Network, *Committee Hansard*, 29 April 2011, p. 60.

from the introduction of a carbon tax. This report is focussed on the carbon tax and its associated compensation mechanisms.

2.96 Australians should be given the opportunity to have their say about the government's proposed carbon tax, given:

- The government has no mandate to introduce a carbon tax – in fact it has a mandate not to;
- The prolonged lack of transparency and the resulting limits on consultation, with no consultation for example through the Council of Australian Governments even though the carbon tax has significant implications for states and territories, especially those that own electricity generation assets;
- No release of sufficient details of the economic modelling to allow third-party scrutiny of the parameters and assumptions used in the modelling to assess the economic consequences of the carbon tax.

Committee comment

2.97 Pressing ahead with a carbon tax in Australia outside of an appropriately comprehensive and binding global framework to price emissions is not effective action on climate change but rather is just an irresponsible act of economic self harm.

2.98 The committee is of the view that in the absence of an appropriately comprehensive global agreement to price emissions, the carbon tax will push up the cost of everything, reduce Australia's international trade competitiveness, cost jobs, put small business under more pressure, hurt regional Australia and all without doing anything to help reduce global greenhouse gas emissions.

2.99 Making overseas businesses more competitive than Australian businesses and helping overseas emitters take market share away from even the most environmentally efficient equivalent business in Australia will do nothing to reduce global greenhouse gas emissions – it will just shift emissions overseas.

2.100 The failure of Copenhagen had serious implications for Australia's policy response to climate change.

2.101 Given there is now no foreseeable prospect of an appropriately comprehensive global agreement to price carbon dioxide emissions, Australia should change its policy approach to reducing global greenhouse gas emissions: away from a carbon tax and an emissions trading scheme towards direct action initiatives.

2.102 Australians were entitled to believe that the Gillard Government had reached the same conclusion in the lead up to the last election.

2.103 Why else did the Prime Minister and the Treasurer promise before the last election that there would be no carbon tax under a Gillard Government after the election?

2.104 After three years of debate in the last Parliament and after the failure of Copenhagen it seemed that even the Gillard Labor Government had recognised that pursuing a carbon tax in the absence of an appropriately comprehensive global agreement to price emissions was not in the national interest.

Chapter 3

The carbon tax the Prime Minister promised we wouldn't have

Introduction

3.1 This chapter outlines the key features of the carbon tax which were released on 10 July 2011 and subsequently updated with the introduction of the Clean Energy Legislative Package into the Parliament on 13 September 2011.

The carbon tax is announced

3.2 On 10 July 2011, the Prime Minister, the Hon. Julia Gillard MP, announced her plan to introduce a carbon tax. The Prime Minister stated:

... we have now had the debate, 2011 is the year we decide that as a nation we want a clean energy future.

Now is the time to move from words to deeds.

That's why I announced today how Australia's carbon price will work.

From 1 July next year, big polluters will pay \$23 for every tonne of carbon they put into our atmosphere.¹

Features of the carbon tax

3.3 This part of this chapter outlines the key features of the carbon tax.

Start date and transitional period

3.4 Starting from 1 July 2012, the price of each tonne of carbon dioxide emissions will be fixed, operating as a carbon tax (the fixed-price period). The initial starting price '... will be \$23 for each tonne of pollution beginning on 1 July 2012'.² The carbon tax will be in operation for three years. Under the government's carbon tax, 'the

1 Prime Minister of Australia, the Hon. Julia Gillard MP, *Address to the nation*, <http://www.pm.gov.au/press-office/transcript-address-nation> (accessed 11 July 2011).

2 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, *Putting a price on carbon pollution*, <http://www.pm.gov.au/press-office/putting-price-carbon-pollution> (accessed 10 July 2011).

price will rise by 2.5 per cent a year in real terms during a three-year fixed price period until 1 July 2015'.³

3.5 Then, from 1 July 2015, the carbon tax will move to an emissions trading scheme where the price will be set by government imposed limits on the permissible amount of carbon dioxide emissions in any one year (the flexible-price period).⁴

3.6 The table below provides an overview of the revenue that will be collected from the carbon tax, and associated changes that form part of the government's carbon tax, according to Treasury modelling.

Table 3.1: Revenue from the carbon tax and associated measures⁵

Year	Revenue from carbon tax (\$m)	Revenue from carbon tax applied via other measures (\$m)	Fuel tax credit reductions (\$m)	Total per year (\$m)
2011-12	0	0	0	0
2012-13	7,740	290	570	8,600
2013-14	8,690	320	70	9,080
2014-15	9,190	320	70	9,580
Total	25,620	930	710	27,260

3.7 An equivalent carbon tax will also apply to synthetic greenhouse gasses and aviation fuels.⁶

The carbon permit a property right?

3.8 Under the Clean Energy Bill 2011:

Section 103: A carbon unit is personal property and, subject to sections 105 and 106, is transmissible by assignment, by will and by devolution by operation of law.⁷

3 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Putting a price on carbon pollution', <http://www.pm.gov.au/press-office/putting-price-carbon-pollution> (accessed 10 July 2011).

4 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Putting a price on carbon pollution', <http://www.pm.gov.au/press-office/putting-price-carbon-pollution> (accessed 10 July 2011).

5 Clean Energy Bill 2011, Explanatory Memorandum, p. 41.

6 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, pp 106 and 105.

3.9 The Explanatory Memorandum for the Clean Energy Bill does not explain why a carbon unit is clearly defined as personal property.

3.10 The direct consequence of defining a carbon unit as personal property is to make it more likely that:

Repeal would amount to an acquisition of property by the commonwealth, as holders of emissions permits would be deprived of valuable asset[s].⁸

3.11 In these circumstances, under section 51(xxxi) of the Australian Constitution, a government acquiring these assets would be required to 'pay compensation, potentially in the billions of dollars. A future government would therefore find repeal prohibitively costly'.⁹

3.12 The definition of a carbon unit as a personal property right limits the scope of action of future governments and parliaments. As economist Professor Henry Ergas has noted:

...internationally, governments have generally ensured that pollution permits are not treated as conventional property rights, precisely as to be able to revise environmental controls as circumstances change. Rather, this provision serves one purpose only: to guarantee any attempt at repeal triggers constitutional requirements to pay compensation, shackling future governments.¹⁰

3.13 The committee explored the issue further and sought advice from the Department of Climate Change and Energy Efficiency on permits and their standing as personal property rights:

Senator BOSWELL: In particular, have you received any advice about the liability of a government which removed the carbon legislations thus removing any value of it in a carbon unit? So, we come into power and we say: 'No, we are not having this.' What happens to that carbon unit?

Mr Sakellaris: I do not recall the details, we would have to take that on notice.

Senator BOSWELL: When did you ask for advice, when did you receive the advice on this particular issue? What did that advice say? Has the department evaluated what the size of any potential future liability will be?

7 *Clean Energy Bill 2011*, Carbon Units Part 4: Property in, and transfer of, carbon units: Division 3, section 103.

8 Remarks attributed to the Hon. Mark Dreyfus QC MP, Parliamentary Secretary for Climate Change and Energy Efficiency, cited in an article by Professor Henry Ergas, 'Labor plants poison pills in carbon tax', *The Australian*, 16 September 2011, p. 12.

9 Professor Henry Ergas, 'Labor plants poison pills in carbon tax', *The Australian*, 16 September 2011p. 12.

10 Professor Henry Ergas, 'Labor plants poison pills in carbon tax', *The Australian*, 16 September 2011, p. 12.

Dr Kennedy: For the last part of the question I can say that the department has not done any analysis around the possible repeal of the system and what the cost would be. As to all the previous questions about when advice was taken, we have not brought our legal advisors with us but we are very happy to take all those questions on notice and provide you with an answer.

Senator BOSWELL: I will read them out again. When did you ask for that advice and when did you receive it? What did the advice say? Has the department evaluated what the size of any potential future liability will be?

Dr Kennedy: We had a person from the Australian Government Solicitor working throughout the pulling together of the legislation. So, if you like, we were receiving advice on an ongoing basis, but we also sought additional—

Senator BOSWELL: You cannot give me what I am asking now, you are prepared to take that on notice.

Dr Kennedy: I can, but I wanted to let you know that a lawyer from the Australian Government Solicitor worked with us all the way through, so in a sense advice was provided as it was done. But we can answer your questions about whether particular pieces of advice were sought external to the department. We are happy to do that.

Senator BOSWELL: And when you received it and what it said, and its potential size of future liabilities.

Dr Kennedy: As I said I do not think we have done any analysis at all on potential liability because we have not evaluated the scenario of repealing the scheme.¹¹

3.14 In its response to the questions taken on notice, the Department of Climate Change and Energy Efficiency noted that they:

... received legal advice on the effect of section 51(xxxi) of the Constitution, relating to the acquisition of property on just terms, on repeal of the legislation. The advice was requested on 16 September 2011 in view of the interest in this issue in the Parliament and in the media, and draft advice was received on 21 September 2011.

Legal advice is subject to legal professional privilege.

The Department has not evaluated the size of any potential future liability of a government that removed the clean energy package of legislation.¹²

11 Senator Ron Boswell, participating Senator, Senate Select Committee on the Scrutiny of New Taxes and Mr Tasos Sakellaris, Assistant Secretary, Carbon Price Legislation Branch, Department of Climate Change and Energy Efficiency and Dr Steven Kennedy, Deputy Secretary, Department of Climate Change and Energy Efficiency, *Proof Committee Hansard*, 16 September 2011, p. 20.

12 Department of Climate Change and Energy Efficiency response to a Question on Notice taken at the public hearing on 16 September 2011.

Committee Comment

3.15 The committee considers that it is highly irresponsible and inappropriate for a government seeking to implement a carbon tax in clear defiance of an explicit pre-election commitment and to deliberately expose Australian taxpayers and the economy to these significant costs in its efforts to prevent future governments from implementing a mandate to rescind such a tax based on its assessment of the national interest.

3.16 This is all the more the case given the uncertainty that currently surrounds the future international environment for climate change policy. Given that uncertainty, the proper course is to seek and retain flexibility, rather than lock-in a path that may prove both futile and costly.

How will the carbon tax work?

3.17 The carbon tax will work in the following way:

Large polluters will report on their emissions and buy and surrender to the Government a carbon permit for every tonne of carbon pollution they produce.

In the fixed price period, as many carbon permits as businesses require to meet their obligations will be available at the set price. This will operate like a carbon tax on around 500 polluters.¹³

Liable businesses will need to buy and surrender to the Government a permit for every tonne of pollution they produce.

- In the fixed price stage, that runs from 1 July 2012 to 30 June 2015, the carbon price will start at \$23 per tonne and rise by 2.5 per cent a year in real terms.
- From 1 July 2015 onwards, the price will be set by the market and the number of permits issued by the Government each year will be capped.

If businesses can lower their pollution, the price they pay will be less. This is how the carbon price drives innovation and energy efficiency.

All revenue from the carbon price will be used by the Government to:

- assist households with price impacts they face by cutting taxes and increasing payments
- support jobs and competitiveness
- build our new clean energy future.¹⁴

13 Australian Government, Securing A Clean Energy Future Website, Carbon Pricing, <http://www.cleanenergyfuture.gov.au/clean-energy-future/carbon-price/#content02> (accessed 10 July 2011).

Coverage

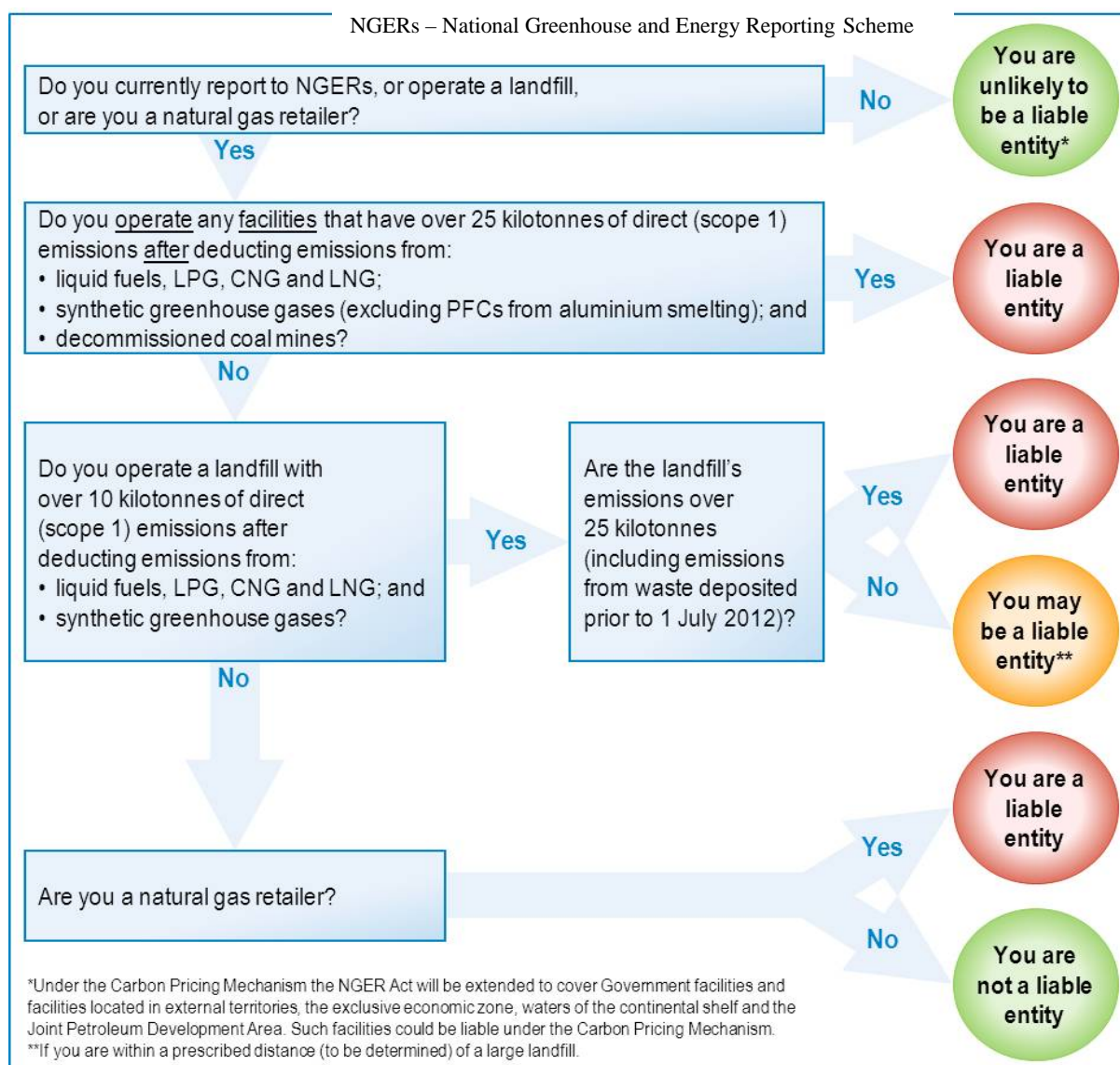
3.18 The carbon tax will apply to facilities that have direct emissions of 25 000 tonnes or more a year of carbon dioxide equivalent, with some exclusions.¹⁵ This is expected to be around 500 carbon emitters.¹⁶

3.19 The graphical representation below provides an overview of how the scheme will rule in and rule out what businesses are covered by the carbon tax.

14 Australian Government, Securing A Clean Energy Future Website, Carbon Pricing, <http://www.cleanenergyfuture.gov.au/clean-energy-future/carbon-price/#content01>, (accessed 10 July 2011).

15 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 28.

16 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Putting a price on carbon pollution', <http://www.pm.gov.au/press-office/putting-price-carbon-pollution>, (accessed 10 July 2011).

Graphic 3.1: Coverage of the carbon tax¹⁷

3.20 The government has not released the names of the emitters that it believes will be covered by the carbon tax. However, on 18 July 2011 the Parliamentary Library released a paper listing the top 299 emitting companies (remembering that the tax is based on individual facilities rather than corporations), using information provided under the National Greenhouse and Energy Reporting Scheme.

3.21 The Parliamentary Library notes that:

... although imperfect, the NGER data is the only public information that provides any indication as to which companies may be liable under the proposed Carbon Pricing Mechanism.¹⁸

17 Australian Government, 500 biggest polluting companies, <http://www.cleanenergyfuture.gov.au/500-companies/> (accessed on 16 August 2011).

3.22 The carbon tax does not apply to certain industry sectors and energy forms. The agriculture sector is excluded from the carbon tax¹⁹ and closed landfills are exempt from the carbon tax as well.²⁰ In addition, parts of the transport sector, for example, fuels used by passenger cars and light commercial vehicles, are also exempt.²¹

3.23 Of the liable businesses, it is estimated that around:

- 135 operate solely in New South Wales and the Australian Capital Territory;
- 110 solely in Queensland;
- 85 solely in Victoria;
- 75 solely in Western Australia;
- 25 solely in South Australia;
- 20 solely in Tasmania; and
- fewer than 10 solely in the Northern Territory.²²

3.24 A further 45 liable entities operate across multiple states.

3.25 Of the estimated 500 businesses:

- around 60 are primarily involved in electricity generation;
- around 100 are primarily involved in coal or other mining;
- around 40 are natural gas retailers;
- around 60 are primarily involved in industrial processes (cement, chemicals and metal processing);
- around 50 operate in a range of other fossil fuel intensive sectors; and
- the remaining 190 operate in the waste disposal sector.²³

18 Source: <http://www.aph.gov.au/library/pubs/climatechange/CarbonPricing/Companies.htm> (accessed 18 July 2011).

19 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 104.

20 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 104.

21 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, pp 105-106.

22 Australian Government, *Securing A Clean Energy Future Website, Carbon Pricing*, <http://www.cleanenergyfuture.gov.au/clean-energy-future/carbon-price/#content02> (accessed 10 July 2011).

23 Australian Government, *500 biggest polluting companies*, <http://www.cleanenergyfuture.gov.au/500-companies/> (accessed 16 August 2011).

3.26 The issue of the number of businesses covered by the carbon tax was raised by the committee during the course of its inquiry. The government has indicated that around 500 emitters would be covered by the carbon tax but this number was questioned. The challenge is about the number of small businesses that will be caught under the government's changes to fuel tax:

CHAIR: I am looking at the exposure draft, page 5, 43(8), 'Working out the amount of carbon reduction'. This clause effectively imposes a carbon price on fuel through a reduction in the fuel tax credit, does it not?

Mr Comley: That is correct.

CHAIR: Essentially, it contains a formula. The credit for taxable fuel or the fuel tax rebate is reduced by a formula that is the quantity of fuel times the carbon price times the carbon emissions rate. Doesn't this mean that recipients of the fuel tax rebate are paying a carbon price from the word go by the wording of your own legislation?

Mr Comley: It certainly means that they are having a reduction in their credit linked to the carbon price, yes.

CHAIR: From day 1, as of 1 July 2012 under your exposure draft?

Mr Comley: Yes, that is correct.

CHAIR: I thought that that was correct, which is not entirely consistent with the proposition that fuel has been excluded from the carbon pricing package that has been released by the government.

Mr Comley: The documents make it clear that there is coverage of the transport sector. In fact, if I were to turn to both the policy tables and the full clean energy document, it is clear that transport is covered in some part. There are exclusions for small on-road vehicles under 4.5 tonnes. But it is entirely consistent with the documentation that has been provided.

Senator WILLIAMS: So are you telling us that the 6.21c a litre on the rebate for transport of more than 4.5 tonnes tare weight will start on 1 July 2012?

Mr Comley: No—sorry Senator. For the large vehicle issue, there is a government commitment to start on 1 July 2014. The fuels being referred to here are a fuels related effectively to off-road use.

CHAIR: And of course the expected revenue which the government intends to include, in terms of transport fuels, into the carbon pricing regime from 2014-15 has been included in the costings of the package, too, has it not?

Mr Comley: It is part of the forward estimates, yes.²⁴

24 Senator Mathias Cormann, Chair, Senate Select Committee on New Taxes, Senator John Williams and Mr Blair Comley, Secretary, Department of Climate Change and Energy Efficiency, *Committee Hansard*, 10 August 2011, p. 42.

3.27 Seeking further information about the impact of the change to the fuel tax, the committee challenged the notion that only 500 companies would be caught by the tax with the Department of the Treasury:

Senator BOSWELL: Yes, how many will be subject to carbon price on fuel from July 2011?

CHAIR: 2012, I think.

Senator BOSWELL: Okay, we will make it 2012.

Mr Heferen: We would have to take that one on notice.

Senator BOSWELL: Based on Taxation Office data, 60,000 businesses including small business will pay a carbon price. Not just the 500 big polluters. Will those 60,000 businesses start paying a carbon price by 2012?

Mr Heferen: Is the reference to the 60,000 businesses those which would have had their fuel tax credit adjusted?

Senator BOSWELL: Yes.

Mr Heferen: I think that relates to the question before, which would be the question of how many businesses will be affected. We have to take that on notice.²⁵

3.28 At the time of finalising the report, no reply to the Question taken on Notice had been received by the committee.

Australia's carbon emissions reduction targets - binding future governments

3.29 The government has committed to reducing carbon emissions by 5 per cent from 2000 levels by 2020 and by up to 15 or 25 per cent depending on the scale of global action.

3.30 Under the Clean Energy Bills, a 'carbon pollution cap' will be put in place through regulations, allowing the government to review the target as circumstances change in accordance with defined principles.²⁶

3.31 The exposure draft includes a mechanism for setting a default carbon emission cap should there not be any regulations in effect. While the regulation containing proposed 'carbon pollution caps' may be disallowed by either House of Parliament, this will not stop the scheme from continuing its operation, as explained by the Explanatory Memorandum to the Clean Energy Bill 2011:

2.8 Having a default in the legislation ensures that the mechanism continues to operate in the event that regulations setting pollution caps do not come into effect. The default cap follows a trajectory consistent with Australia's

25 Senator Ron Boswell, participating Senator, Senate Select Committee on the Scrutiny of New Taxes and Mr Rob Heferen, Executive Director, Department of the Treasury, *Committee Hansard*, 23 September 2011, p. 23.

26 Clean Energy Bill 2011, Carbon pollution cap: Part 2, sections 17 and 18.

unconditional target of reducing national emissions to five percent below 200 levels by 2020, taking into account projections for emissions from uncovered sectors (including the impact of emissions reduction measures on those sectors).²⁷

3.32 The consequences of this legislative design were clearly identified by economist, Professor Henry Ergas, who noted that:

... unless the government can secure a majority for an alternative target, permitted emissions are automatically cut by up to 10 per cent in a single year crippling economic activity.

A Coalition government, or even a Labor government less wedded to the Greens, would therefore find itself trapped.²⁸

3.33 Under the legislation, these automatic reductions in carbon emissions are not a disallowable instrument. That is, to prevent automatic increases in the carbon tax, or the trading price of emission permits, both Houses of Parliament would need to pass legislation to that effect. As the Explanatory Memorandum to the Clean Energy Bill 2011 states:

Default pollution caps exist in the event the regulations setting pollution caps do not take effect. This is only a concern when regulations setting pollution caps are either not tabled in the Parliament by the deadline or are tabled and then disallowed.²⁹

3.34 In contrast, any Ministerial decision to reduce carbon emissions by more than the default amount is a disallowable instrument, meaning that only one house of parliament need vote against this decision to have it disallowed.³⁰ In effect, under the government's clean energy legislation, in the future taxes can increase even without the approval of the House of Representatives, even though the House is given the exclusive constitutional power to raise taxes.³¹

Australia's carbon emissions reduction targets

3.35 The government has committed to reduce carbon emissions by 5 per cent from 2000 levels by 2020 and by up to 15 or 25 per cent depending on the scale of global action. Though the target is one that has bipartisan support, the opposition disagrees about the mechanism by which the target might be reached. It should be noted that this target is not included in the Clean Energy Bill introduced into Parliament on 13 September 2011. Rather a 'carbon pollution cap' will be put in place through

27 Clean Energy Bill 2011, Explanatory Memorandum, pp 109-110.

28 Professor Henry Ergas, 'Labor plants poison pills in carbon tax', *The Australian*, 16 September 2011, p. 12.

29 Clean Energy Bill 2011, Explanatory Memorandum, p. 107.

30 Clean Energy Bill 2011, Explanatory Memorandum, p. 106.

31 Australian Constitution, section 53.

regulations, allowing the government to review the target as circumstances change, in accordance with principles set out in the Bill. The Bill does include a mechanism for setting a default carbon pollution cap should there not be any regulations in effect.

3.36 Under the Government's carbon tax scheme, Australia's emissions to 2020 will actually rise by around 90 million tonnes. The only way Australia will meet its 5% target will be as a result of the purchase of international permits. Therefore, the Government will be implementing a new tax that, from the outset, will not actually achieve its desired aim.

3.37 The table below highlights the policy dimension of this. In 2009-10 Australia emitted 578 million tonnes, but by 2020 it will be 679 million tonnes. So despite slower GDP growth and slower growth in real wages, emissions will be 90 million tonnes higher. These are the government's own figures.

Table 3.2 Headline Indicators³²

Table 1: Headline Australian indicators

Macroeconomic modelling with an initial domestic carbon price of \$20 in 2012-13				
	Medium global action scenario	Core policy scenario	Ambitious global action scenario	High price scenario
Current levels – at 2009-10				
Actual emissions, Mt CO ₂ -e	578	578	578	578
GNI per person, \$'000/person	55.8	55.8	55.8	55.8
Medium term – at 2020				
Emission target, change from 2000 level, per cent	-	-5	-	-25
Emission target, tonnes CO ₂ -e per person	-	20.5	-	16.2
Domestic emissions, Mt CO ₂ -e	679	621	664	534
Carbon price, real, \$/t CO ₂ -e	-	29	-	62
GNI per person, \$'000/person	65.1	64.8	65.0	64.1
GNI, change from global action scenario, per cent	-	-0.5	-	-1.4
GDP, change from global action scenario, per cent	-	-0.3	-	-0.9
Emission-intensity of GDP, kg CO ₂ -e/\$	0.39	0.36	0.38	0.31
Long term – at 2050				
Emission target, change from 2000 level, per cent	-	-80	-	-80
Emission target, tonnes CO ₂ -e per person	-	3.1	-	3.1
Domestic emissions, Mt CO ₂ -e	1008	545	951	323
Carbon price, real, \$/t CO ₂ -e	-	131	-	275
GNI per person, \$'000/person	91.2	86.9	90.6	84.2
GNI, change from global action scenario, per cent	-	-4.7	-	-7.1
GDP, change from global action scenario, per cent	-	-2.8	-	-4.7
Emission-intensity of GDP, kg CO ₂ -e/\$	0.28	0.15	0.26	0.09
Overall impact, 2010 to 2050				
Australian real GNI per person, average annual growth, per cent	1.2	1.1	1.2	1.0
Australian real GDP per person, average annual growth, per cent	1.4	1.3	1.4	1.3
Gross world product, PPP, average annual growth, per cent	3.4		3.4	

Note: All dollars are 2010 prices, PPP - purchasing power parity, Mt CO₂-e - million tonnes of carbon dioxide equivalent.

Effects on household prices with an initial carbon price of \$23 in 2012-13		
	Weekly expenditure \$ per week	Consumer prices Per cent
Electricity	3.30	10
Gas	1.50	9
Food	0.80	<0.5
Overall effect	9.90	0.7

Source: Treasury estimates from MMRF, GTEM and PRISMOD.

3.38 These targets will require cutting forecast emissions by at least 23 per cent in 2020.³³ Importantly:

The Government also commits to a new 2050 target to reduce emissions by 80 per cent compared to 2000 levels, in line with targets announced by the United Kingdom and Germany.³⁴

32

http://www.treasury.gov.au/carbonpricemodelling/content/report/downloads/Modelling_Report_Consolidated_update.pdf, p. 1 (accessed 4 October 2011).

33 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. xi.

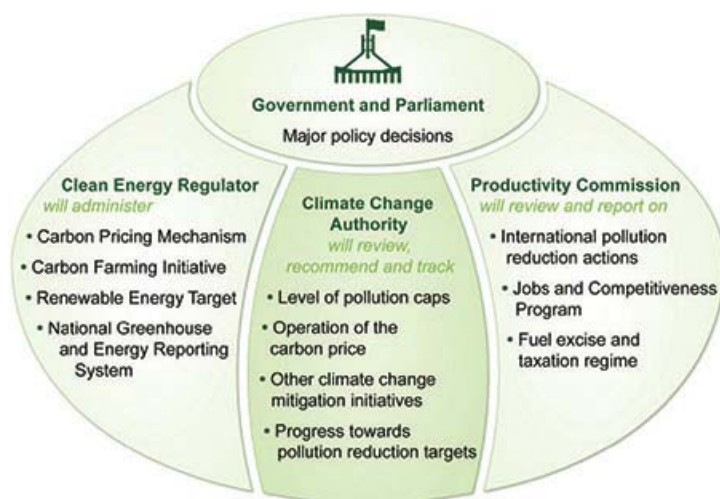
34 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. xi.

Regulatory and governance structure

3.39 The governance structure for the scheme is set out in the graphic below. The Australian government and the Minister for Climate Change and Energy Efficiency are responsible for setting the overall policy direction for climate change.

3.40 The Climate Change Authority will recommend pollution caps and oversee the operation of the flexible carbon permit trading market. The Clean Energy Regulator will administer the scheme that enables the trading of permits. The Productivity Commission will conduct ad hoc reviews into climate change matters at the direction of the government and will review the compensation provided under the scheme but not the direct spending on, for example, the Clean Energy Finance Corporation. As a result, significant Commonwealth expenditure will not be subject to regular, independent scrutiny.

Graphic 3.2: Governance arrangements for the carbon tax³⁵



Good money after bad

3.41 Prior to the announcement of the framework for the Clean Energy Plan and the institutions outlined above to administer the carbon tax, the government had already started allocating resources to the climate change cause.

Australian Competition and Consumer Commission

3.42 The government announced on 13 July 2011 that the Australian Competition and Consumer Commission (ACCC) would be policing claims by businesses that could mislead consumers into believing that price rises had occurred due to the carbon tax when this was not the case.

35 Australian Government, *Clean Energy Future Plan*, Chapter Three – Putting a price on carbon (Figure 3.3), <http://www.cleanenergyfuture.gov.au/clean-energy-future/securing-a-clean-energy-future/#content04>, (accessed 10 July 2011).

3.43 The funding for the ACCC to undertake this activity is:

... \$12.8 million over four years to the ACCC and those funds will go towards the establishment of a dedicated team which will involve more than 20 staff and their activities will be directed towards enforcement and towards education of businesses and consumers.³⁶

3.44 This measure was not included as a cost in the government's Clean Energy Plan announced on 10 July 2011.

Other regulatory agencies

3.45 In addition to the establishment of the regulators referred to above, other agencies who will be involved in the implementation of the government's Clean Energy Plan are:

- the Australian Renewable Energy Agency (ARENA); and
- the Clean Energy Finance Corporation (CEFC).

3.46 ARENA will be a statutory authority, set up to provide funds for research, development and commercialisation of renewable energy technologies. It will incorporate a number of existing programs, such as the Australian Centre for Renewable Energy, the Australian Solar Institute and the Australian Biofuels Research Institute. It is projected to be revenue neutral, as it will utilise \$3.2 billion of funding already allocated to those programs over nine years. The government's plan is that future funding for ARENA will come from dividends paid by the Clean Energy Finance Corporation.³⁷

3.47 The role of the CEFC will be to invest in the commercialisation and deployment of renewable energy, energy efficiency and low-emissions technology. It has allocated funding under the Clean Energy Plan of \$10 billion over five years from 2013-14.³⁸

3.48 The CEF was subject to inquiry during the course of the committee undertakings its public hearings. The corporation is a part of the regulatory

36 Joint Press Conference by the Hon. David Bradbury MP, Parliamentary Secretary to the Treasurer and Mr Peter Kell, Deputy Chair of the Australian Competition and Consumer Commission and Member of Enforcement Committee, Press Conference – Melbourne, 13 July 2011, <http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=transcripts/2011/103.htm&pageID=004&min=wms&Year=&DocType> (accessed 13 July 2011).

37 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 122.

38 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 121.

architecture for the overall carbon tax scheme but despite this its exact status remains unclear:

CHAIR: The carbon tax package said that no decision had yet been made whether the Clean Energy Finance Corporation would sit in Treasury or in the Finance portfolio. Has this been resolved?

Mrs McCulloch: It has not yet been finalised.

CHAIR: When is that expected to be finalised?

Mrs McCulloch: Discussions are ongoing with the government, including in relation to appointments to the CEFC.³⁹

3.49 The reason for the inability of the government to determine which Minister will have responsibility for the CEFC opens the way for speculation about whether disagreements between Ministers or departmental secretaries is driving the delay.

3.50 The CEFC will be responsible for a substantial amount of public funds, some \$10 billion dollars in total. The committee was very much interested in the corporations and the decisions surrounding its creation:

CHAIR: Did the government or the Multi-Party Climate Change Committee seek advice from Treasury on the Clean Energy Finance Corporation before a decision was made to establish it?

Mrs McCulloch: Treasury provided advice on the package in its entirety, including the Clean Energy Finance Corporation.⁴⁰

3.51 The committee pursued the matter further and sought information about the rationale for a public sector organisation competing with private businesses in the provisions of loans:

CHAIR: I am seeking an explanation as to what the policy basis is for a government-financing entity providing commercial loans to private sector energy companies? By definition, if they are commercial loans why can companies not source their loans from the private sector?

Mrs McCulloch: Commercial in that sense does not necessarily mean the market rate or the hurdle rates that that these businesses would need to go through. There are a large number of potential clean energy and renewable projects out there that cannot get finance for a range of reasons and the purpose of the entity, the CEFC, is to leverage private sector investment in this area.

39 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, General Manager, Industry, Environment and Defence Division, Department of the Treasury, *Committee Hansard*, 10 August 2010, p. 8.

40 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, Department of the Treasury, *Committee Hansard*, 10 August 2010, p. 8.

CHAIR: So the Clean Energy Finance Corporation will provide loans and equity and they are not quite commercial because you are saying that they are pitched at a level that would not necessarily be market level?

Mrs McCulloch: Commercial is, in that sense, intending that they will earn a positive return.

CHAIR: What sort of positive return?

Mrs McCulloch: I will have to take that on notice. I do not know that detail.⁴¹

3.52 The response from Treasury to the question taken on notice, in its entirety is:

Recipients of commercial loans provided by the CEFC are expected to be charged an interest rate comparable to that offered by lenders in the private sector.

The objective of the CEFC is to remove market barriers that would otherwise hinder the financing of large-scale clean energy and renewable projects. That is, the CEFC will operate in the ‘market gap’, encouraging projects that wouldn’t otherwise proceed by providing an alternative source of debt or equity to underpin a project’s financial viability.⁴²

3.53 While the Clean Energy Finance Corporation will be providing a variety of loans, some of which are to be non-commercial, this invariably gives rise to concerns about the fiscal impact of such organisations on the Commonwealth Budget:

CHAIR: I refer to the costings that you referred me to before, on page 131, of the plan document. How come the Clean Energy Finance Corporation has a fiscal impact of \$944 million over the forward estimates?

Mrs McCulloch: That costing includes things like the administration—the actual running costs of the CEFC. It also includes an allowance for some concessional loans—some loans that are below the government’s bond rate—and it also allows for some prudent estimation of defaults. It is standard.

CHAIR: Out of \$10 billion, you are expecting nearly \$1 billion will go to administration, defaults and non-commercial loans or equity?

Mrs McCulloch: They are a portion of the costings, yes.

CHAIR: Are you able to provide us the detail of what makes up that \$944 million? How much of it is administration? How much of it is an estimate

41 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, Department of the Treasury, *Committee Hansard*, 10 August 2010, p. 8.

42 Department of the Treasury, reply to Question on Notice taken at the public hearing on 10 August 2011.

of defaults? How much of it is an estimate of what you call concessional loans?⁴³

3.54 Treasury also took these questions on notice and replied:

The fiscal impact of \$944 million across the forward estimates reflects the net impact of revenue and expenses excluding public debt interest costs. Departmental expense is equal to \$60 million over the forward estimates.

Over half is explained by the expense associated with concessional loans and the remainder is largely explained by the allowance that is made for defaults.

The funding provided to the CEFC will impact on gross debt. To the extent that the CEFC acquires offsetting debt-like assets, such as loans, there will be a lesser impact on net debt.

Treasury expects that taxpayers will, over time, receive interest and dividends. That is, taxpayers will get a positive return on the investment.⁴⁴

3.55 The inevitable outcome of a government-owned financing corporation providing funds to industry is the age-old issue of picking winners. During the 1980s various state governments were engaged in this practice with the electorates across Western Australia, South Australia and Victoria left to pick up the pieces:

CHAIR: Essentially this is back to governments picking winners in supposedly commercial transactions, though, isn't it? Have you looked at the history of Tricontinental, the State Bank of South Australia and WA Inc. to better manage the risk that eventuated in those circumstances, where governments lost billions picking winners in what were supposedly commercial transactions? Is the risk management framework more robust than what it was at the time?

Mrs McCulloch: The government has announced that it will appoint a chair to conduct a review over a period of about six months, reporting early next year, to assess a risk management framework, provide advice to government on an appropriate investment mandate and look at issues around the establishment of the CEFC—what function and form it takes. The risk management frameworks have not been established yet. The government is seeking advice, including from experts in the financial sector.

CHAIR: I am sure that with the Tricontinental, State Bank of South Australia and WA Inc. examples there were chairs of boards. I am sure that they had corporate governance frameworks and reviews of risk management and so on. Governments getting involved in this sort of

43 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, Department of the Treasury, *Committee Hansard*, 10 August 2010, p. 8.

44 Department of the Treasury, reply to Question on Notice taken at the public hearing on 10 August 2011.

business and trying to pick winners is not really a very good way of dealing with taxpayers' money. But that is just my view.⁴⁵

3.56 To the extent that picking winners is successful or unsuccessful, there will be an impact on the Commonwealth Budget:

CHAIR: I am giving that as an example to make a point. The point is this: if the government is taking equity through the Clean Energy Finance Corporation, what is the accounting treatment when the value of shares drops, for example, from \$1.50 to 25c?

Mrs McCulloch: That would affect the government's balance sheet, just like it does with any other equities that it enters into.

CHAIR: So it would affect the government's balance sheet?

Mrs McCulloch: Yes.

CHAIR: Are you quite sure of that?

Mrs McCulloch: Yes. The government's balance sheets takes into account all of its assets and liabilities.

CHAIR: Except that the Clean Energy Finance Corporation of course as a whole is off budget.

Mrs McCulloch: No, it is within the general government sector and therefore on the government's balance sheet.

CHAIR: Except that you are assuming that you are going to make a return. You are saying that, to the extent that that does not happen, that will be obvious; that will be transparent.

Mrs McCulloch: There are two distinctions here. The figures that you are looking at in the document are the cash and fiscal flows on an annual basis. Then there is also the balance sheet—what does it do for gross debt, for the government's asset position and for net debt? The CEFC is incorporated in the government's balance sheet.⁴⁶

3.57 The committee pursued the matter:

CHAIR: How is the accounting treatment of the Clean Energy Finance Corporation determined? How subcommercial would a Clean Energy Finance Corporation transaction have to be before it was treated as a subsidy that had a fiscal impact? Is it, as you have just mentioned, as soon as it is below the bond rate that it hits the budget bottom line?

Mrs McCulloch: I would have to double-check the exact definition. The accounting standards here are consistent with the ABS GFS guidelines and

45 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, Department of the Treasury, *Committee Hansard*, 10 August 2010, p. 9.

46 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, Department of the Treasury, *Committee Hansard*, 10 August 2010, p. 9.

consistent with the way Finance do the costings for these types of entities. Exactly the definition used for what is concessional, I will take on notice.⁴⁷

3.58 The reply from Treasury to the question taken on notice, in its entirety, stated:

The Charter of Budget Honesty Act 1998 requires that the budget be based on external reporting standards. The budget treatment of CEFC is consistent with accounting and budget rules.

Concessional loans are loans that charge an interest rate below the market interest rate.

The accounting treatment of concessional loans involves an upfront impact to the fiscal balance and net debt (to the extent of the concession). As repayments are made, this impact is unwound over the life of the loan.

The impact to the underlying cash balance is limited to the net of interest receipts and interest payments.

Treasury expects that taxpayers will, over time, receive interest and dividends. That is, taxpayers will get a positive return on the investment.⁴⁸

Advertising and community awareness

3.59 On 16 June 2011, almost a month before it unveiled its plan, the government announced a national advertising campaign to sell the carbon tax. The Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, has stated that the campaign will cost \$12 million. This is in addition to an allocation of \$8.2 million in the 2011-12 Budget for the Climate Change Foundation Campaign, which will fund a \$3 million grants program, as well as 'partnerships and other community engagement activities'.⁴⁹

3.60 It has been suggested that the total cost of all government advertising to support its carbon tax is closer to \$25 million, when the cost of leaflets and websites is added in.⁵⁰

47 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, Department of the Treasury, *Committee Hansard*, 10 August 2010, p. 9.

48 Department of the Treasury, reply to Question on Notice taken at the public hearing on 10 August 2011.

49 The Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, Climate change public information campaign, Media Release, 16 June 2011 <http://www.climatechange.gov.au/minister/greg-combet/2011/media-releases/June/mr20110616.aspx> (accessed 18 August 2011).

50 Ross Peake, 'Gillard, Abbott in campaign cost debate', *Canberra Times*, 18 July 2011, p. 3.

Compensation for households

3.61 The government has indicated that the price impact of its carbon tax will mean that '[o]n average, households will see cost increases of \$9.90 a week, while the average assistance will be \$10.10 a week'.⁵¹

3.62 As a tax, the carbon tax and related measures will raise around \$27.2 billion between 2012-13 and 2014-15. The government has announced that '[m]ore than half of the revenue raised by putting a price on carbon pollution will go to households to help meet price impacts'.⁵²

3.63 Chapter 7 explores the impact of the carbon tax on households in more detail.

For households under the carbon tax

3.64 Under the government's carbon tax, a new Clean Energy Supplement will be paid. The assistance will mean up to:

- \$110 per child for a family that receives Family Tax Benefit Part A;
- \$69 extra for families that receive Family Tax Benefit Part B;
- \$218 extra per year for single income support recipients and \$390 per year for couples combined for people on allowances; and
- \$234 per year for single parents, in addition to the increased family payments they receive.⁵³

3.65 The '[p]ayments of the Clean Energy Supplement will be paid on a fortnightly basis from March 2013 for most allowances, July 2013 for family payments and January 2014 for students on Youth Allowance'.⁵⁴

51 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, the Hon. Jenny Macklin MP, Minister for Families, Housing, Community Services and Indigenous Affairs and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed 10 July 2011).

52 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, the Hon. Jenny Macklin MP, Minister for Families, Housing, Community Services and Indigenous Affairs and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed 10 July 2011).

53 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, the Hon. Jenny Macklin MP, Minister for Families, Housing, Community Services and Indigenous Affairs and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed 10 July 2011).

For pensioners under the carbon tax

3.66 Under the government's carbon tax:

A new Clean Energy Supplement will be paid, equal to a 1.7 per cent increase in pensions, allowances and family payments. The assistance will mean:

- Up to \$338 extra per year for single pensioners and self-funded retirees, and up to \$510 per year for pensioner couples combined.⁵⁵

3.67 The '[p]ayments of the Clean Energy Supplement will be paid on a fortnightly basis from March 2013 for pensions and most allowances'.⁵⁶*Reform of income taxation arrangements*

3.68 Under the carbon tax, a range of income taxation reform measures will also be introduced. These include:

From day one of the carbon price on 1 July 2012, every taxpayer with income below \$80,000 will receive a tax cut, with most getting at least \$300 a year.

These tax cuts will be permanent, and they will increase. On 1 July 2015, a second round of tax cuts will apply, increasing the saving to at least \$380 a year for most taxpayers earning under \$80,000 compared to now.⁵⁷

54 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, the Hon. Jenny Macklin MP, Minister for Families, Housing, Community Services and Indigenous Affairs and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed 10 July 2011).

55 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, Minister for Families, the Hon. Jenny Macklin MP, Housing, Community Services and Indigenous Affairs and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed 10 July 2011).

56 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, the Hon. Jenny Macklin MP, Minister for Families, Housing, Community Services and Indigenous Affairs and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed 10 July 2011).

3.69 Taken together:

The combined changes mean headline tax rates will better match the effective rate that a lot of taxpayers are actually paying at the moment. All taxpayers under \$80,000 will pay less tax.⁵⁸

Cost of household assistance measures

3.70 The cost of all household assistance measures are set out in the table below.

Table 3.3: Cost of household assistance under the carbon tax⁵⁹

Year	Increases in transfer payments (\$m)	Tax Reform (\$m)	Low Carbon Communities (\$m)	Other energy efficiency measures (\$m)	Implementation of assistance (\$m)	Totals (\$m)
2011-12	1,470	0	5	7	51	1,543
2012-13	775	3,350	39	13	54	4,230
2013-14	2,302	2,370	83	15	39	4,890
2014-15	2,380	2,320	90	13	28	4,830
Total	6,927	8,040	217	48	172	15,403

Note: Numbers may not add due to rounding. Numbers in the above table are those contained in the source document.

3.71 Chapter 7, 8 and 10 of the Report provide a detailed critique of the government's carbon tax and its impact on households, the Commonwealth Budget, the states and, importantly, jobs and investment.

Links to international markets

3.72 Under the carbon tax, emitters cannot buy carbon credits from international markets for the purpose of offsetting their domestic emissions. This prohibition will

57 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, the Hon. Jenny Macklin MP, Minister for Families, Housing, Community Services and Indigenous Affairs, and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed on 10 July 2011).

58 Joint media release, the Hon. Julia Gillard MP, Prime Minister, the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, the Hon. Jenny Macklin MP, Minister for Families, Housing, Community Services and Indigenous Affairs and the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Assistance for nine out of ten Australian households', <http://www.pm.gov.au/press-office/assistance-nine-out-ten-australian-households>, (accessed on 10 July 2011).

59 Clean Energy Bill 2011, Explanatory Memorandum, p. 41.

last during the fixed-price period.⁶⁰ At the conclusion of the fixed-price period, an emissions trading scheme will come into operation. Once the flexible-price period commences and up until 2020, emitters will be restricted to meeting at least half of their annual liability from domestic permits or credits. This prohibition will be reviewed by the Climate Change Authority in 2016.

Compensation for affected industries

3.73 Compensation arrangements for affected industries come from two sources. Measures agreed by the MPCCC and stand alone Government measures.

3.74 Under the carbon tax, '[t]he Government will allocate around 40 per cent of carbon price revenue to help businesses and support jobs'.⁶¹ Chapter 5 of the report considers compensation for emissions intensive industries.

Jobs and Competitiveness Program

3.75 The government has developed a Jobs and Competitiveness Program to assist industries that are vulnerable under the carbon tax. The Program:

... has been designed to provide assistance to the most emissions-intensive activities in the economy that are highly exposed to international competition - either on export markets or from importers.⁶²

3.76 The fund is to provide \$9.2 billion over the first three years of the carbon tax.⁶³

3.77 The types of industries that are emissions intensive are those that are very important to the Australian economy. These industries include coal, steel, aluminium, food and farming. Together, the mining and agriculture sectors account for over 70 per cent of Australia's exports. They are the industries that build and sustain Australia's prosperity.

3.78 Almost all emissions-intensive and trade exposed activities are in the manufacturing sector. The Jobs and Competitiveness Program will provide support to activities that generate 80 per cent of emissions, specifically:

60 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 107.

61 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

62 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/clean-energy-future/securing-a-clean-energy-future/#content06>, (accessed 5 October 1011).

63 Clean Energy Bill 2011, Explanatory Memorandum, p. 42.

The Government expects that 40 to 50 activities will be eligible. Examples of eligible activities include aluminium products, steel, manufacturing, pulp and paper manufacturing, glass making, cement production and petroleum refining.⁶⁴

3.79 Unfortunately for emissions intensive industries as they confront the carbon tax, '[f]urther details on eligibility for assistance under the Jobs and Competitiveness Program will become available in the future'.⁶⁵ This situation is undesirable given that the introduction of the carbon tax is less than one year away and businesses will need to make employment and investment decisions prior to and after the possible introduction of the carbon tax.

3.80 In order to assist the emissions-intensive industries most exposed to the impact of the carbon tax '[t]he government will allocate, free of charge, Australian carbon permits to the most emissions-intensive and trade exposed industries'.⁶⁶

3.81 The Jobs and Competitiveness Program entails two categories of assistance:

The most emissions-intensive and trade-exposed activities will initially be eligible for 94.5 per cent shielding from the carbon price. A second category of assistance will provide an initial shielding level of 66 per cent of the carbon price.⁶⁷

3.82 The table below provides an overview of the cost of the Jobs and Competitiveness Program.

64 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 54.

65 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

66 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 55.

67 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

Table 3.4: Cost of the Jobs Competitiveness Program⁶⁸

Year	Jobs and Competitiveness Program (\$m)
2011-12	0
2012-13	2,851
2013-14	3,059
2014-15	3,312
Total	9,222

The assistance rates will be reduced by 1.3 per cent per year.⁶⁹

Steel industry

3.83 In order to help the steel industry adjust to a lower carbon future:

The Government will provide assistance worth \$300 million over four years to encourage investment and innovation in the Australian steel manufacturing industry through the Steel Transformation Plan. This will help the sector transform into an increasingly efficient and economically sustainable industry in a low-pollution economy.⁷⁰

3.84 A separate government document the *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan* states that the \$300 million is over five years.⁷¹

3.85 According to the government, this measure is '... additional to those agreed by the Multi-Party Climate Change Committee'.⁷² The Steel Transformation Plan is not

68 Clean Energy Bill 2011, Explanatory Memorandum, p. 41.

69 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 55.

70 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

71 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 133.

72 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

included as a cost in the government's Clean Energy Plan released on 10 July 2011 and was not agreed by the MPCCC.⁷³

3.86 The Steel Transformation Plan is costed at \$189 million over 2011-12 until 2014-15.⁷⁴

Coal industry

3.87 The coal industry is of vital importance to the Australian economy. To assist the coal industry:

The \$1.3 billion Coal Sector Jobs Package will provide transitional assistance to help the coal industry to implement carbon abatement technologies for the mines that produce the most carbon pollution. The amount of carbon pollution produced by coal mines varies greatly, so the fairest way to deliver assistance is to target assistance at those mines that are most impacted by the introduction of the carbon price.⁷⁵

3.88 The Coal Sector Jobs package is \$1.3 billion over six years, the cost running over a four year period starting in 2011-12 is \$696 million.⁷⁶

3.89 In addition, this measure will be supported by a '\$70 million Coal Mining Abatement Technology Support Package (which) will provide support for the development and deployment of technologies to reduce fugitive emissions from coal mines'.⁷⁷ A total of \$70 million is allocated over six years, with the allocation during the four year period starting 2011-12 being a total of \$41 million.⁷⁸

3.90 This measure is '...additional to those agreed by the Multi-Party Climate Change Committee'.⁷⁹ The Coal Sector Jobs Package and the Coal Mining Abatement

73 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 14 September 2011).

74 Clean Energy Bill 2011, Explanatory Memorandum, p. 42.

75 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

76 Clean Energy Bill, Explanatory Memorandum, p. 42.

77 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

78 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, pp 134–135 and Clean Energy Bill, Explanatory Memorandum, p. 42.

79 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf>, (accessed 10 July 1011).

Technology Support Package are not included as costs in the government's Clean Energy Plan announced on 10 July 2011. Chapter 4 explores the impact of the carbon tax on the coal industry.

Treatment of heavy on-road transport

3.91 The government will alter the application of taxation arrangements in the transport industries. Under the government's plans:

... an effective carbon price on fuel used by heavy on-road transport from 1 July 2014 through changes in fuel tax credits. This will significantly broaden coverage of the carbon price as heavy on-road vehicles account for over 25 per cent of road transport emissions.⁸⁰

3.92 The changes to the treatment of heavy on-road transport were not included as costs in the government's Clean Energy Plan announced on 10 July 2011.⁸¹ The measure starts in 2014-15 and amounts to \$510 million in revenue in its first year of operation.⁸²

Electricity Industry

3.93 The government has also made a commitment to negotiate the closure of some of the highest emitting coal-fired power stations, representing around 2000 megawatts of generation capacity, by 2020.⁸³ No funds are set aside in the Clean Energy Plan for this project, however, Treasury has advised the committee that these funds will derive from the budget's contingency reserve.⁸⁴ Chapter 6 explores the issues surrounding the impact of the carbon tax on Australia's electricity industry.

Revenue and outlays under the carbon tax

3.94 The table and graph below compare revenues and outlays associated with the carbon tax agreed within the MPCCC.

80 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 133.

81 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 133.

82 Clean Energy Bill, Explanatory Memorandum, p. 42.

83 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 74.

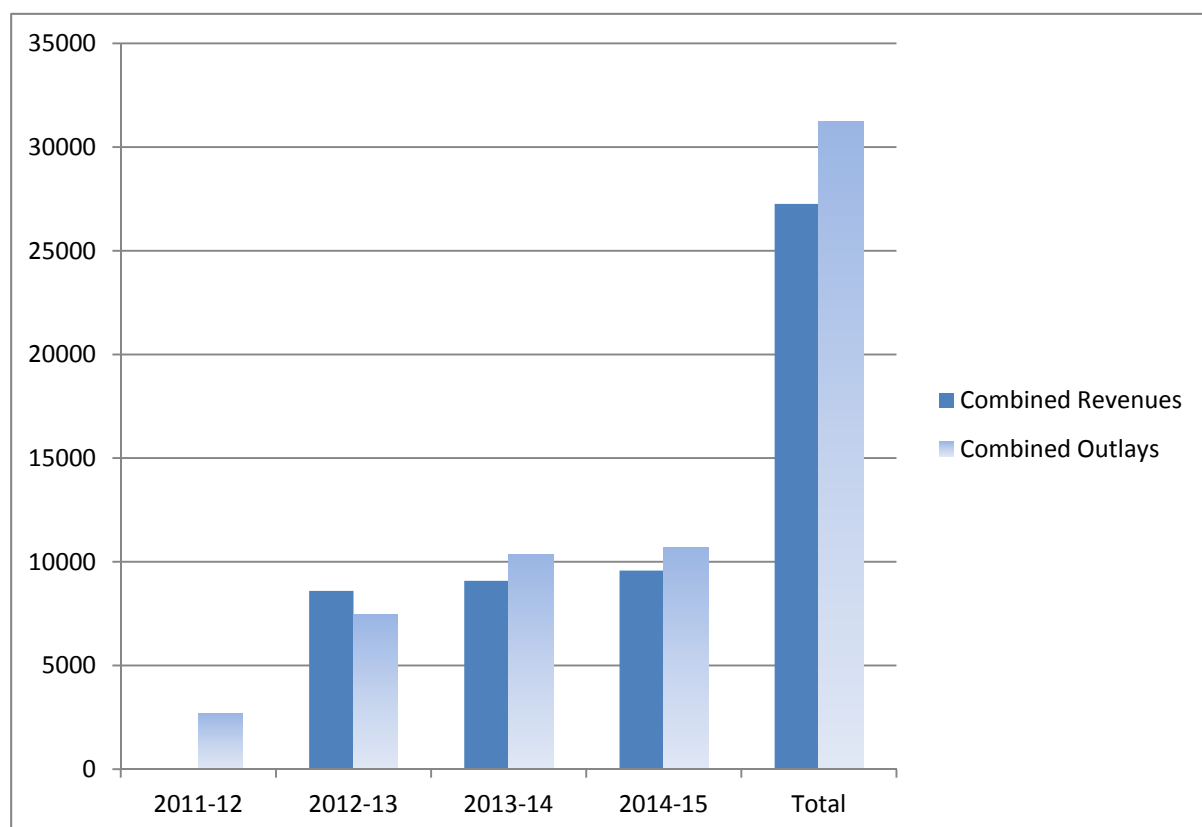
84 Mrs Luise McCullough, Department of the Treasury, *Committee Hansard*, 10 August 2011, pp 3-4.

Table 3.5: Revenues and outlays under the carbon tax agreed by the MPCCC⁸⁵

Year	Combined revenues (\$m)	Combined outlays (\$m)	Difference (\$m)
2011-12	0	2,717	-2,717
2012-13	8,600	7,490	1,110
2013-14	9,080	10,366	-1,285
2014-15	9,580	10,696	-1,116
Total	27,260	31,269	-4,008

Note: Numbers may not add due to rounding, total net impact matches exactly the source for this table.

Graphic 3.3 Revenues and outlays under the carbon tax agreed by the MPCCC⁸⁶



3.95 Table 3.5 and Graphic 3.3 do not give the full picture of the cost blow-out of the carbon tax and associated measures. It does not include:

⁸⁵ Clean Energy Bill 2011, Explanatory Memorandum, p. 41.

⁸⁶ Clean Energy Bill 2011, Explanatory Memorandum, p. 41.

- \$12.8 million for the ACCC;⁸⁷
- \$12 million for advertising and raising community awareness of the carbon tax and its effect;⁸⁸
- \$41 million for the Coal Mining Abatement Technology Support Package;⁸⁹
- \$189 million for the Steel Transformation Plan;⁹⁰ and
- \$696 million for the Coal Sector Jobs Package.⁹¹

3.96 Outlay measures not directly accounted for in the release of the government's Clean Energy Plan amount to a staggering \$950.8 million.

3.97 The government's stand alone measures have increased revenues by \$510 million due to the imposition of an additional fuel tax credit reduction for heavy on-road transport from 2014-15.

3.98 These same stand alone measures create a deficit of \$440.8 million. That is, the government's measures raise \$510 million through the fuel tax credit reduction and outlay \$950.8 million.

3.99 The table and graphic below bring together the combined MPCCC and government revenues and outlays to highlight a combined deficit of \$4449.8 million.

87 Joint Press Conference by the Hon. David Bradbury MP, Parliamentary Secretary to the Treasurer and Mr Peter Kell, Deputy Chair of the Australian Competition and Consumer Commission and Member of Enforcement Committee, Press Conference – Melbourne, 13 July 2011
<http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=transcripts/2011/103.htm&pageID=004&min=wms&Year=&DocType>, (accessed 13 July 2011).

88 The Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Climate change public information campaign', Media Release, 16 June 2011
<http://www.climatechange.gov.au/minister/greg-combet/2011/media-releases/June/mr20110616.aspx>, (accessed 18 August 2011).

89 Clean Energy Bill 2011, Explanatory Memorandum, p. 42.

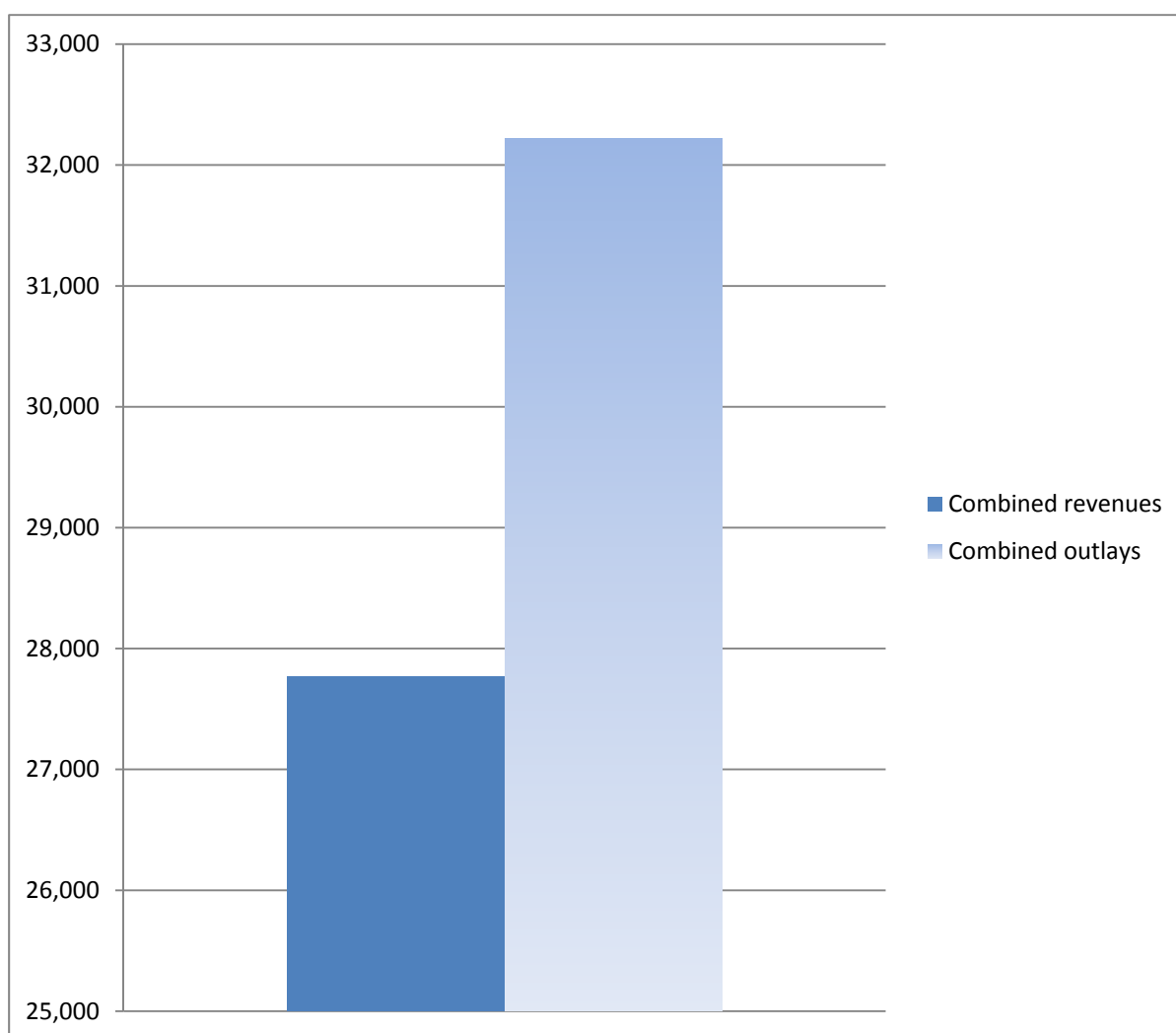
90 Clean Energy Bill 2011, Explanatory Memorandum, p. 42.

91 Clean Energy Bill 2011, Explanatory Memorandum, p. 42.

Table 3.6: Total revenues and outlays under the carbon tax agreed by MPCCC and the government's stand alone measures⁹²

	MPCCC and government combined revenues (\$m)	MPCCC and government combined outlays (\$m)	Difference (\$m)
Total	27,770	32,219.8	-4,449.8

Graphic 3.4 Total revenues and outlays under the carbon tax agreed by MPCCC and the government's stand alone measures⁹³



92 Clean Energy Bill 2011, Explanatory Memorandum, pp 41 – 42 and paras: 3.95 – 3.99 of this Report.

93 Clean Energy Bill 2011, Explanatory Memorandum, pp 41 – 42 and paras: 3.95 – 3.99 of this Report.

Committee comment

3.100 It is clear to the committee that the case for a carbon tax has not been made. The proposed tax is a tax which the Gillard Government promised it would not introduce.

3.101 Furthermore, the committee considers that the proposed design of the tax, which will introduce property rights, is highly inappropriate. This feature of the carbon tax legislation is clearly and deliberately designed to prevent future governments from implementing a mandate to rescind the carbon tax and has the potential to expose taxpayers to significant compensation payouts.

3.102 More generally, given the uncertainties surrounding the global framework for climate change, it could lock Australia into a policy that is both futile and costly.

3.103 Not only is this particular aspect of the proposed legislation highly inappropriate but, in addition, the carbon tax package as proposed is fiscally irresponsible – the introduction of the tax and its associated measures will result in a cost blow-out of \$4,449.8 million. So much for the carbon tax being 'budget neutral' as the Parliament was promised at budget time.

Recommendation 1

It is the Committee's view that the carbon tax should be opposed and the legislation defeated in the Parliament as:

- **there is no electoral mandate for the carbon tax;**
- **the modelling that supports it is based on a number of highly contestable assumptions;**
- **it is likely to undermine Australian businesses' ability to compete in the global economy;**
- **it will have significant adverse effects on particular sectors and regions, with a particularly disproportionate impact on regional Australia;**
- **the effect of the policy on the cost of living, and on jobs is likely to be higher than the government's current estimates indicate;**
- **there is considerable evidence that the carbon tax will not result in any real environmental gain, despite imposing a significant cost on the economy over the next thirty years.**

The Committee recommends that the carbon tax be opposed by the Parliament.

Recommendation 2

The Committee recommends that if the Parliament believes that it should proceed with the carbon tax, any provisions in the legislation designed to bind future governments seeking to prevent them from amending or rescinding the scheme be removed.

Chapter 4

Australia's future prosperity exposed

Introduction

4.1 This chapter of the report summarises evidence obtained on emissions intensive trade exposed industries during the Senate Select Committee on the Scrutiny of New Taxes inquiry into the carbon tax.

4.2 A trade exposed industry can be defined as one that is 'constrained in their ability to pass through costs due to actual or potential international competition'.¹

4.3 Evidence was provided on the potential consequences for the Australian economy, jobs and the environment. There is concern that Australian investment and jobs will shift offshore to locations where carbon pricing is yet to take hold. The potential for carbon leakage with no net gain to the environment and in fact the serious risk of net detriment was raised during the inquiry.

4.4 This chapter also considers the impact of trade exposure to Australia's farming and manufacturing industries.

Carbon leakage

4.5 The *Garnaut Climate Change Review: Final Report* defined carbon leakage as:

... a loss of competitiveness and relocation of trade-exposed, emission-intensive industries as a result of carbon penalties applying in some countries but not others.²

It also stated:

Trade exposed, emissions-intensive industries represent a special case. All other factors being equal, if such enterprises were subject to a higher emissions price in Australia than in competitor countries, there could be sufficient reason for relocation of emissions-intensive activity to other countries. The relocation may not reduce, and in the worst case may increase, global emissions. This is known as the problem of carbon leakage.³

1 Australian Government, *Carbon Pollution Reduction Scheme: Australia's Low Pollution Future* White Paper Glossary, December 2008, p. 16.

2 Professor Ross Garnaut, *Garnaut Climate Change Review: Final Report*, October 2008, p. 230.

3 Professor Ross Garnaut, *Garnaut Climate Change Review: Final Report*, October 2008, p. 316.

4.6 The Grattan Institute describes carbon leakage as occurring only when:

- carbon pricing makes an Australian industry internationally uncompetitive;
- in its new overseas location, the industry emits more greenhouse gases per unit of production;
- there are no offsetting government policies to support the Australian industry.⁴

4.7 This definition seems unduly restrictive. Clearly, the mere fact of providing compensation does not offset the problem of leakage, as that compensation has a net cost to the community. In other words, imposing a tax and then offsetting its effect through compensation will still make the community worse off, so long as providing the compensation is not costless. As all taxes and transfers impose some economic case, the mere fact that the outcome is neutral in terms of the industry directly affected does not mean the community is no worse off.

4.8 As a result, in considering the impact on specific sectors, the key issue is whether industries within those sectors are likely to lose competitiveness. While compensation may reduce the resulting loss to shareholders, it will not, in those cases, prevent Australia's national income from declining.

4.9 Additionally, it is important to note that the compensation provided typically does not reduce the carbon tax that will be imposed on the marginal unit of output – that is, it leaves some share of output affected by the tax. Indeed, that is crucial if the tax is indeed to change behaviour. As a result, there can be a loss in competitiveness, and harm to national income, even if the bulk of an industry's emissions are initially exempt from the tax.

4.10 It is important to note that carbon leakage may occur even without the physical relocation of economic activity or capital to an overseas country. For example, carbon leakage can occur if:

- carbon pricing in Australia means a scaling down of production in Australia, to the advantage of production in other countries, even if the physical assets and some production remains in Australia, or;
- carbon pricing lowers demand for carbon-intensive fossil fuels, thus putting downward pressure on their global price. In this event, countries without carbon pricing may increase their demand for the more economically attractive fossil fuel energy sources. For example, if carbon pricing were quarantined to developed countries, then the price of oil and gas would likely drop, encouraging developing countries to use more of these inputs, and give effect to an indirect form of carbon leakage.

4 Grattan Institute, *Submission 26, Attachment 1*, p. 10.

Specific industries

4.11 This section of the report outlines the potential impact of the carbon tax / emissions trading scheme on key Australian industries. This part of the report provides a summary of the concerns that were put to the committee during the inquiry process. The industries that appeared before the committee at hearings and those that made submissions are representative of key industries for Australia's economy.

Australia's mining and resources industries

4.12 The Minerals Council of Australia has put forward its views on the likely impact of a carbon tax on its members and this important industry. According to the Council, Australia's mineral sector will face carbon costs nearing \$30 billion by 2020, while '(o)nly 10 per cent of minerals sector exports will receive transitional safeguards to protect their competitiveness'.⁵

4.13 The Council estimates that the carbon costs to just three minerals could be more than \$25 billion to 2020. Over the period to 2012-21 the possible cost for the coal sector alone will exceed \$18 billion. For gold, the likely liability is to be \$2 billion and for nickel it will be around \$1.34 billion, up to 2020.⁶

Coal

4.14 The Australian coal industry has also expressed concern about the potential impact of a carbon tax on its future.

4.15 Australia uses both brown and black coal. Black coal, is Australia's largest export and is expected to earn over \$60 billion in export income in 2011-12.⁷ On the domestic front, over 54 per cent of Australia's electricity is derived from black coal. With the addition of brown coal, 76 per cent of domestic electricity production comes from coal.⁸ Importantly, the coal industry employs over 40 000 people and supports a further 100 000 jobs indirectly.⁹

4.16 The Australian Coal Association expressed concern about Australia moving ahead of its competitors:

The government's proposed carbon-pricing timetable will have Australia moving ahead of its competitors, involving significant risks to our economy. Australian action on climate change too far ahead of global action, particularly by competitors in developing countries, would be costly

5 Minerals Council of Australia, *Submission 57*, p. 24.

6 Minerals Council of Australia, *Submission 57*, p. 24.

7 Mr Ralph Hillman, Executive Director, Australian Coal Association, *Committee Hansard*, 9 June 2011, p. 39.

8 Mr Ralph Hillman, Australian Coal Association, *Committee Hansard*, 9 June 2011, p. 39.

9 Mr Ralph Hillman, Australian Coal Association, *Committee Hansard*, 9 June 2011, p. 39.

and without benefit to the global climate. For example, coal not produced here as a result of the carbon price would simply be replaced with production by overseas competitors, none of whom have or plan to have a similar tax on coal mining, a classic case of carbon leakage. It follows that, whatever the carbon price policy mechanism adopted, it must include measures to preserve the competitiveness of Australia's trade exposed industries, including coal mining. These measures should also address the impact of pricing carbon on coalmines that face contractual rigidities preventing them passing on costs of emission permits to power station customers.¹⁰

4.17 The Association provided a more specific outline of its concerns in the context of the future of the coal industry:

Mr Hillman: Global demand for coal is out there. It is determined by Japan, China, India and the United States, the big coal users.

CHAIR: It is not reducing, is it?

Mr Hillman: No, it is projected to grow quite strongly. You have to assume that if we close a mine here or diminish a mine's output here for any reason, that that production will be taken up by a competitor. A very good example of this was in 2004 as the sudden uptick in global demand for coal occurred and infrastructure constraints in Australia prevented us from meeting that demand. We were advantaged by the price increase, which was partly driven by our inability to respond to demand. The Indonesians picked it up. Because they have a much more flexible infrastructure arrangement for getting coal from mine to ship, they picked up 15 per cent of our thermal coal market and pushed us from No. 1 to No. 2 in the export stakes.

CHAIR: But to the extent that there is just a shift and substitution internationally of production in Australia. It might be simplistic, but on the face of it there does not appear to be any resulting reduction in emissions.

Mr Hillman: That is right. If the coal is produced elsewhere, the emissions will go up elsewhere. If you assume that the emissions from a tonne of Australian coal, broadly speaking, are not vastly different from those from other countries—and it may even be better because of more efficient mining techniques and higher quality coal—emissions will just go up elsewhere and probably to a greater extent.

CHAIR: And if we want to reduce global greenhouse gas emissions then whatever we do to emissions in terms of reductions domestically will not make much difference. If we reduce emissions in Australia in a way that increases them potentially in other parts in the world, we are not actually—

Mr Hillman: It does potentially, but it is hard to measure that. Australian coals are very good quality. They have a high thermal content and generally

10 Mr Ralph Hillman, Australian Coal Association, *Committee Hansard*, 9 June 2011, p. 39.

a low ash content, which means they are generally more efficient coals than, say, Indonesian steaming coals.¹¹

4.18 In order to affirm the importance of the coal industry to Australia, the Coal Association has taken to advertising its policy position in major national daily newspapers.

4.19 In addition to the Australian Coal Association, the committee also heard evidence from Anglo American Coal.

4.20 Anglo American's position on the carbon tax is:

... we do not support the federal government's proposed carbon pricing mechanism in its current form. The proposed carbon pricing mechanism will severely impact Anglo American. The value of our four planned new mines would be significantly reduced, putting at risk \$4 billion of investment, more than 3,200 jobs and \$5.7 billion of ongoing royalty payments to state governments. This is not because of an unwillingness to respond to permit price signals by reducing emissions; it is because the absence of readily available mitigation technologies means that for a period of up to 10 years we will be unable to sustainably reduce our emissions below current levels.¹²

4.21 The global producer noted the potential risk of carbon leakage caused by the impact of the carbon tax:

CHAIR: You talked about the potential of not going ahead with mines or having to close mines or losing market share. If you were to lose market share, where would you lose market share to?

Mr Barlow: In terms of metallurgical coal, which is our main business, right now I know there are major developments in Mozambique, in Mongolia and in Indonesia. They are the major three areas. As well as that, in North America, Canada is reopening a number of metallurgical coal mines. The US have industry there, but they have been limited by ports, and they are putting in place more port capacity to allow them to export more coal.

CHAIR: Are any of those competitors going to face a carbon tax or a price on carbon—

Mr Barlow: They are not going to face a carbon tax in terms of fugitive emissions. Clearly, in Canada and the US, there is always talk, but fugitive emissions are not included. In terms of Mongolia and Mozambique, which are probably the two main competitors, I am unaware of any discussion.

11 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mr Ralph Hillman, Australian Coal Association, *Committee Hansard*, 9 June 2011, p. 43.

12 Mr Anthony Barlow, Head of Resource Development and Operational Excellence, Anglo American Metallurgical Coal Pty Ltd, *Committee Hansard*, 1 September 2011, p. 40.

CHAIR: How does our coal production in Australia compare in terms of the level of fugitive emissions or other emissions? If activity were to shift from Australia to Mozambique, Mongolia or other places, would there be a difference in the emissions footprint?

Mr Barlow: In terms of the emissions footprint from burning coal, we would not think there would be much of a change at all.

CHAIR: So we would lose economic activity—

Mr Barlow: Correct.

CHAIR: and we would lose investment but there would not be any beneficial impact on global emissions?

Mr Barlow: Correct.¹³

4.22 The response of the coal industry to the carbon tax was that:

The proposed scheme places an arbitrary cost on Australian exporters that is not aligned with the cost being borne by competitors.¹⁴

The gold industry

4.23 According to the Minerals Council of Australia, the impact on Australia's minerals will be:

The principal beneficiaries of the CPRS-style scheme will be Australia's competitors in global commodities markets. Most of Australia's competitors across major commodities are developing nations that have no plans to introduce a comparable carbon price.¹⁵

4.24 The Minerals Council of Australia Gold Forum made a separate submission on the potential impact of a carbon tax on its industry. The gold industry is 'Australia's third largest export earner and is expected to contribute nearly \$17 billion to Australia's export income by 2011-12'.¹⁶ The industry directly employs nearly 14 000 and supports another 40 000 Australians in all states and the Northern Territory, mostly in regional and remote communities.¹⁷

13 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mr Nicholas Barlow, Anglo American Metallurgical Coal Pty Ltd, *Committee Hansard*, 1 September 2011, p. 40.

14 Mr David Peevers, Rio Tinto Australia Manager, stand alone reported comments in Perry Williams, Andrew Cleary and David Crowe, 'Carbon tax triggers price rises', *Australian Financial Review*, 12 July 2011, p. 12.

15 Minerals Council of Australia, *Submission 57*, p. 25.

16 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 3.

17 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 3.

4.25 Expenditure on exploration is around \$600 million per year.¹⁸ This exceeds the amount spent on commodities in the minerals sector and in the total Australian minerals sector this outlay is second only to petroleum exploration.¹⁹ According to the Gold Forum, this expenditure is 'discretionary and highly mobile'.²⁰ With more than 90 countries producing gold:

The gold sector is fully trade exposed and Australian producers have no capacity to influence prices.²¹

4.26 While the Australian gold industry will face a \$2.1 billion impost by 2020, the gold industries in major producing countries such as China, the United States, Indonesia, Peru, Russia, Canada, South Africa and Ghana will not face such costs 'in the near term'.²² Importantly, the European Union will provide 100 per cent free permits to its gold sector.²³

The magnetite industry

4.27 The Australian iron ore industry is undergoing a transformation with the emergence of magnetite as an additional ore export to the traditional form of iron ore, haematite. Haematite is typically dug up and shipped abroad. Magnetite by contrast is dug and then processed through an energy intensive process to be more refined than haematite.

4.28 The emerging magnetite industry is a new but important source of employment in the mining industry:

Table 4.1: Contribution of the magnetite industry²⁴

Capital expenditure	Employment (construction)	Employment (ongoing)	Royalties (A\$)	Annual export revenue (A\$)
\$11.9 billion	8,750 jobs	2,580 jobs	\$345 million	\$6.3 billion

4.29 One of the unusual features of magnetite is its emissions here in Australia compared to overseas:

18 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 3.

19 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 3.

20 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 3.

21 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 3.

22 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 4.

23 Minerals Council of Australia Gold Forum, *Supplementary Submission 57A*, p. 4.

24 Magnetite Network presentation to the Senate Select Committee on the Scrutiny of New Taxes, 29 April 2011.

We expect that our emissions in Australia will be approximately 10 times the emissions of a similar sized haematite operation. However, it is important that these Australian emissions be put in the context of the global steel production value chain, which I mentioned earlier. Across that global value chain, magnetite has substantially lower emissions than haematite. The higher emissions in Australia are more than offset by savings from using magnetite in steel production overseas.²⁵

4.30 The introduction of a carbon tax in the absence of an international agreement and appropriate industry assistance could lead to a perverse outcome:

A carbon pricing scheme which taxes emissions in Australia without any capacity for recognising overseas savings would see our industry—which will produce lower global emissions and more Australian jobs—taxed more than our competitors. This would be a perverse outcome from both an economic and environmental perspective.²⁶

Industry reaction to the carbon tax

4.31 The Minerals Council of Australia made a swift and decisive response to the impact of the carbon tax on its industry, specifically one of Australia's most important:

It will impose the highest carbon price in the world, compromising the competitiveness of Australia's export and import competing sectors without environmental benefits.²⁷

4.32 The impact of the carbon tax on the bottom line of the minerals industry will be substantial:

Under the carbon tax package, the minerals industry will face costs of \$25 billion between 2012 and 2020.²⁸

4.33 According to the Minerals Council of Australia, the government's scheme will hit Australia in a manner that is not comparable with other countries:

The Government and Greens are imposing costs that none of our international competitors face, and cannot be justified in transitioning the Australian industry to a low carbon future.²⁹

4.34 The impact could see carbon leakage affecting one of Australia's key industries:

It will simply export investment, jobs, global market share and emissions offshore.³⁰

25 Mr Simon Corrigan, Member, Magnetite Network, *Committee Hansard*, 29 April 2011, p. 56.

26 Mr Simon Corrigan, Member, Magnetite Network, *Committee Hansard*, 29 April 2011, p. 57.

27 Media release, Minerals Council of Australia, *Carbon tax package*, 10 July 2011.

28 Media release, Minerals Council of Australia, *Carbon tax package*, 10 July 2011.

29 Media release, Minerals Council of Australia, *Carbon tax package*, 10 July 2011.

4.35 Under the carbon tax, the minerals industry is not receiving the assistance available to other sectors:

Ninety per cent of Australia's minerals exports receive no safeguarding under this scheme. They will pay the full carbon price ahead of their international competitors.³¹

4.36 One of Australia's leading miners had this to say about the government's carbon tax:

We have to keep earning our position. We have to keep our costs competitive. Things like the mineral resources tax and the carbon tax really hurt that situation.³²

Queensland Nickel

4.37 Queensland Nickel raised concerns that the implementation of the proposed carbon tax as it now stands will place them at a significant trade disadvantage to their overseas competitors.³³ Queensland Nickel is a 100 per cent value-add manufacturing/processing plant with a turnover of \$1.1 billion per year.³⁴ Queensland Nickel is one of the top 500 emitters – it is number 48 on the government's list.³⁵ Its operations, located in Townsville, provide the largest amount of private employment in North Queensland as well as significant regional benefits through payments to government, Queensland Rail, Townsville port operation and a number of local businesses and community sponsorships:³⁶

An independent assessment of direct industrial and consumption effects, commissioned by the Townsville Enterprise group and conducted in January 2009, estimated the impact of closure of Queensland Nickel and the loss of then 750 direct jobs would result in approximately 2,396 jobs lost within the Townsville community. Since the purchase of the plant by Mr Palmer we have increased our workforce from 550 when he took over to 900 direct employees now and a further 200 contractors, resulting in a direct positive impact and no doubt a bigger financial impact if we were to change at the moment.³⁷

30 Media release, Minerals Council of Australia, *Carbon tax package*, 10 July 2011.

31 Media release, Minerals Council of Australia, *Carbon tax package*, 10 July 2011.

32 Ms Gina Rinehart, Executive Chairman of Hancock Prospecting, stand alone reported comments in Perry Williams, Andrew Cleary and David Crowe, 'Carbon tax triggers price rises' *Australian Financial Review*, 12 July 2011, p. 12.

33 Mr Trefor Flood, General Manager, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

34 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

35 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 37.

36 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

37 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

4.38 Queensland Nickel's concern is that the clean energy bills, as they stand, will force them into a loss situation with serious impacts on their operations and the region while at the same time providing an advantage to their high emitting overseas competitors:

The policy intent is to direct assistance to Australian businesses and Queensland Nickel is the only Australian owned nickel producer. The other two are multinational companies. A single definition for nickel would grossly under compensate Queensland nickel and deliver a windfall gain to at least one of the multinationals because they would average all the emissions across them, divide them by 3 and lift one out of an area where they are not compensated.

...

Overall Queensland Nickel has significant concerns about the clean energy future bill. The government is embarking on a massive development program and obviously manufacturing will pay for it. Regional areas, due to increased distribution costs, will be hardest hit, and we are in a regional area. Queensland Nickel's significant contribution to regional development, investment and employment is put at risk by the proposed bill, increasing the impact in the Townsville region.

...

In short, because there is no current reduction opportunity that would enable Queensland Nickel to utilise, say, the three-for-one offer that is currently out there in the proposed clean technology program, and in the absence of a fair and equitable definition for nickel, the impact of the carbon price on the business will be serious in the short term and could be catastrophic in the long term.³⁸

4.39 The witness explained that the fact that the carbon tax would result in an unlevel playing field would lead to these potentially negative outcomes.

4.40 At the time of writing this report the price of nickel was falling rapidly, with expectations that it will fall further.³⁹

Overall impact on Australia's competitors: a free kick to competitors

4.41 According to the Minerals Council of Australia, '[t]he principal beneficiaries of the carbon pricing scheme will be Australia's competitors in global commodities markets'.⁴⁰ The reason that the Minerals council was able to reach this position is that,

38 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 36.

39 Source: <http://www.bloomberg.com/news/2011-09-23/copper-drops-to-lowest-in-a-year-as-nickel-tin-plunge-on-recession-threat.html> & <http://www.abc.net.au/rural/news/content/201109/s3326709.htm> (accessed 3 October 2011).

40 Minerals Council of Australia Gold Forum, *Submission*, August 2011, p.18.

[m]ost of Australia's competitors across major commodities are developing nations that have no plans to introduce a comparable carbon price.⁴¹

4.42 The table highlights the main competitor countries to Australia across a range of commodities. None of the countries in this table impose a carbon tax on their mineral sectors or are likely to do so in the foreseeable future:

Table 4.2: Australia main commodity competitors, none with a carbon tax⁴²

Iron ore	Brazil	India	South Africa	Canada
Thermal coal	Indonesia	Russia	South Africa	Colombia
Met. coal	USA	Canada	Russia	Poland
Copper	Chile	Peru	Indonesia	Canada
Gold	China	USA	Russia	South Africa
Aluminium	China	Russia	Canada	USA
Nickel	Russia	Indonesia	Canada	Philippines
Zinc	China	Peru	USA	India
Lead	China	USA	Peru	Mexico
Manganese	China	South Africa	Kazakhstan	India
Silver	Peru	Mexico	China	Bolivia
Tin	China	Indonesia	Peru	Bolivia
Uranium	Kazakhstan	Canada	Namibia	Russia

Source: ABARES, *Australian Commodity Statistics 2010*.

*Data for Iron ore, coal and copper concentrate are based on 2009 export statistics.

Data for aluminium, nickel, zinc, lead, manganese, silver, tin and uranium is based on 2009 production statistics.

Nickel, zinc, lead, silver and tin are mine production statistics.

Data for gold is based on production and drawn from *GFMS Gold Survey 2011*.

Liquefied Natural Gas

4.43 The Australian Petroleum Production and Exploration Association (APPEA) has expressed concern about the impact of a carbon tax on their members. The domestic petroleum production and exploration industry is worth around \$26 billion.⁴³ The industry employs around 15 000 people directly.⁴⁴

4.44 As APPEA has stated:

A point overlooked in recent discussions on this issue is the fact that Australia's LNG projects face fierce global competition. Australia's major LNG competitors include: Qatar, Indonesia, Malaysia, Trinidad and Tobago, Oman, the United Arab Emirates, Egypt, Equatorial Guinea, Nigeria, Algeria and Brunei. In the future, they will also include PNG and Russia, and could even include the US on the back of their enormous shale gas development in recent years. This is, I am sure you would agree, an

41 Minerals Council of Australia Gold Forum, *Submission*, August 2011, p. 18.

42 Minerals Council of Australia Gold Forum, *Submission*, August 2011, p. 18.

43 Ms Belinda Robinson, Chief Executive Officer, Australian Petroleum and Production Exploration Association, *Committee Hansard*, 9 June 2011, p. 17.

44 Ms Belinda Robinson, Australian Petroleum and Production Exploration Association, *Committee Hansard*, 9 June 2011, p. 18.

eclectic list of countries. In addition to exporting LNG, the one thing they have in common is that very few are taking action to put an effective price on carbon; indeed, many are likely to be at the bottom of the list of countries who will be taking action in the foreseeable future.

Let me emphasise this point. All of Australia's current major LNG competitors have not taken on binding emission reduction obligations and do not have policies that place an effective carbon price on their LNG exports.⁴⁵

4.45 The potential for Australian produced and exported LNG to be replaced with that from competitor countries may in fact contribute to increased global greenhouse gas emissions:

CHAIR: ... I understood the research which I have read, which was commissioned by APPEA, to show that for every tonne of emissions from producing LNG in Australia you could save five to nine tonnes of emissions, from memory, in China by displacing coal, and about four tonnes of emissions in Japan.

Ms Robinson: That is right. They are the projects that I am referring to. There were actually three.

CHAIR: Can you just talk us through that research and modelling?

Ms Robinson: There are three different research projects. One looked at emissions on a lifecycle basis of LNG coming from the North West Shelf and going into Japan, one looked at LNG coming from the North West Shelf and going into China and one looked at coal seam gas to LNG going into China, assuming a substitute for coal. They came up with different numbers. The lowest number was that for every tonne of emissions created as a consequence of producing LNG in Australia, around 2½ to nine tonnes are saved when used to generate electricity in those countries. There is a large range there, because that depends on the nature of our projects, and it depends on the nature of the electricity generation and the assumptions that are made around the electricity generators in those countries. Nevertheless, under any scenario, for every tonne of emissions that we produce through the production of LNG here we are making at least twice that amount—up to nine times that amount—in assisting the world to reduce its global emissions. That needs to be understood and framed as part of our policy objectives.⁴⁶

4.46 APPEA's reaction to the government's carbon tax was direct and to the point:

... the carbon policy announced today recognises the role of gas within Australia but does little to protect the competitiveness of Australia's gas

45 Ms Belinda Robinson, Australian Petroleum and Production Exploration Association, *Committee Hansard*, 9 June 2011, p. 11.

46 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Ms Belinda Robinson, Australian Petroleum and Production Exploration Association, *Committee Hansard*, 9 June 2011, p. 13.

export industry and much to secure a strong future for liquefied natural gas (LNG) producers in Qatar, Malaysia, and Indonesia.⁴⁷

4.47 The potential for APPEA's members to reduce emission should not be forgotten:

The export gas industry rejects the politically motivated label of 'big polluter' when for every tonne of emissions produced in liquefying natural gas, up to nine and a half tonnes are removed from the atmosphere when substituted for coal in customer countries.⁴⁸

4.48 Mr Grant King, the Managing Director of Origin Energy noted that:

It is puzzling that one industry that Australia could turn up and genuinely be able to demonstrate an impact on global emissions is LNG and yet that industry is receiving less assistance than others.⁴⁹

4.49 The government's carbon tax appears to have moved little from the CPRS:

The Government's policy treatment of LNG appears to be unchanged from the outcome announced in November 2009 and:

- Will initially see LNG producers receive up to 66 per cent of their permits, with this allocation decaying to 50 per cent;
- Will be reviewed in 2014-15, adding further uncertainty to LNG producers contemplating major investment decisions; and,
- Narrowly defines LNG (it only considers emissions from the LNG plant itself rather than the whole production process) and significantly reduces the degree to which producers can access free permits.⁵⁰

47 Media Release, Australian Petroleum and Production Exploration Association, 2009 re-run will not reduce emission where most needed,

http://www.appea.com.au/images/stories/media/110710_2009%20re-run%20will%20not%20reduce%20emissions%20where%20most%20needed.pdf
(accessed 12 July 2011).

48 Media Release, Australian Petroleum and Production Exploration Association, 2009 re-run will not reduce emission where most needed,

http://www.appea.com.au/images/stories/media/110710_2009%20re-run%20will%20not%20reduce%20emissions%20where%20most%20needed.pdf
(accessed 12 July 2011).

49 Mr Grant King, Managing Director of Origin Energy, stand alone reported comments in the *Australian Financial Review*, 12 July 2011, p. 12.

50 Media Release, Australian Petroleum and Production Exploration Association, 2009 re-run will not reduce emission where most needed,

http://www.appea.com.au/images/stories/media/110710_2009%20re-run%20will%20not%20reduce%20emissions%20where%20most%20needed.pdf
(accessed 12 July 2011).

Manufacturing

4.50 The government's package made it clear that they intended to shift electricity consumers behaviour at both a domestic and commercial level by raising the cost of electricity.

4.51 It should be noted that there are hundreds of thousands of small and medium businesses across Australia that will not receive assistance under the government's scheme. Many of these businesses are energy intensive and cannot become more efficient. However, at the same time, they will not be in a position to fully pass on their additional costs down the supply chain. These are costs that these businesses will have to absorb.

4.52 The manufacturing sector in Australia is already struggling with current exchange rates and a substantial drop in international competitiveness. The introduction of a carbon tax will compound these problems even further through a government initiated change.

4.53 The Minerals Council of Australia in its appearance before the Joint Select Committee on Australia's Clean Energy Future on 27 September 2011 provided a summary of the overall impact on the manufacturing industry as a result of the carbon tax.

Mr Pearson: ... I can tell you that the minerals sector opposes the passage of this, the clean energy future legislation. ... in all measures, the proposed legislation will put forward the world's biggest carbon tax. The carbon price will be the highest. It will be \$23 ahead of, that's 50 per cent higher than the EU price, two and a half times the New Zealand price and nearly twelve times the price that applies in the regional greenhouse gas emissions trading scheme that operates in the north-east of the United States.

The tax take per capita will be the world's highest. The tax take will be many, many times higher than applies in the European Union in the past and in the six years of its operation to date and in the, as we look forward.

The transition period for industry to adjust will be the world's shortest.

In the European Union, there will be an industrial firm will not buy all of its permits until 2027. In Australia, there will be hundreds of industrial firms, including in our own sector which will buy all of its permits from day one.

So 25 years transition for the European industrial firm. No transition for the Australian industrial firm.

The level of assistance to trade exposed industry will be the weakest in the world. 75 per cent of exporting firms of European exports, merchandise exports, will be covered by free permits after they start auctioning off permits in 2013.

About 20 per cent of Australian exports will be exported by firms that will receive assistance.

The safeguards for jobs in the manufacturing sector and mining sector will be far inferior to those in the EU. 14.6 million Europeans work in

manufacturing jobs that will receive free permits after 2013. Nine per cent of manufacturing jobs, their firms will receive assistance under the jobs and competitors under this scheme.

The cost burden on Australian exporting and importing competing industries will be the harshest in the world.

I can think of other average firm, you can call it the joint select committee PTY LTD. In the first three years of this scheme, that firm and think of a firm with an identical emissions operating in Australia and in Europe – the Australian firm will pay for one million tonnes of Co2 per year, that Australian firm will pay \$72 million. It's receiving no assistance, as we've said before, very few Australian firms will. So \$72 million burden for the Australian firm. The same, the very same industrial firm in the EU, receiving no free permits because of its trade exposure but receiving, will pay AU\$14 million.⁵¹

Aluminium

4.54 By its own admission, Australia's aluminium industry is carbon intensive:

Our alumina refineries, aluminium smelters and rolling mills are emission-intensive and trade-exposed. By their very nature they represent a significant carbon footprint. However, the price we receive for our product is governed by the international aluminium price. Until the vast majority of our international competitors adopt carbon pricing, we will not be able to pass an Australian carbon cost on to our customers; hence, our trade exposure.

It is likely that a carbon price would need to be in place for something like 70 per cent to 80 per cent of global production before it would be built into the international commodity price.⁵²

4.55 Australia's aluminium industry is impressive.

Currently Australian facilities are globally competitive. We are the largest producer of bauxite. We are one of the two largest producers of alumina along with China and we are the fifth largest producer of aluminium. Unlike other processing industries in Australia, we have natural advantages, including mineral resources and energy resources, that ensure that we can compete in global markets, we will be able to compete in the future if we get the policy right, and we will see growth in these industries. The aluminium industry is Australia's largest process export earner. We

51 Mr Brendan Pearson, Deputy Chief Executive, Minerals Council of Australia, *Proof Committee Hansard*, Joint Select Committee on Australia's Clean Energy Future Legislation, 27 September 2011, p. 71.

52 Mr Tim McAuliffe, General Manager – Climate Strategy and Federal Government Relations, Alcoa of Australia, *Committee Hansard*, 29 April 2011, p. 18.

generate more than \$11 billion in export earnings. In international markets our major competitors include China and the Middle East.⁵³

4.56 The aluminium industry is not only important in the context of its size and export earnings, but because of the employment that it generates across the country:

It employs about 17,000 people directly and you could use some standard sort of economic multipliers to take that out to probably 60,000 or so people directly and indirectly. They are predominantly in regional areas—Gladstone, the Hunter Valley, Geelong, Portland in Victoria, Tasmania and southwest Western Australia.⁵⁴

4.57 The graph below is a representation of the potential impact that a carbon tax could have on an Australia's aluminium industry. While Australia is in the second quartile at the moment for production capacity, the potential for that competitive position to be damaged is real:

CHAIR: Can you talk to us about the current economic circumstances in which your industry operates and in which a carbon tax would be introduced if it does indeed come into effect on 1 July 2012?

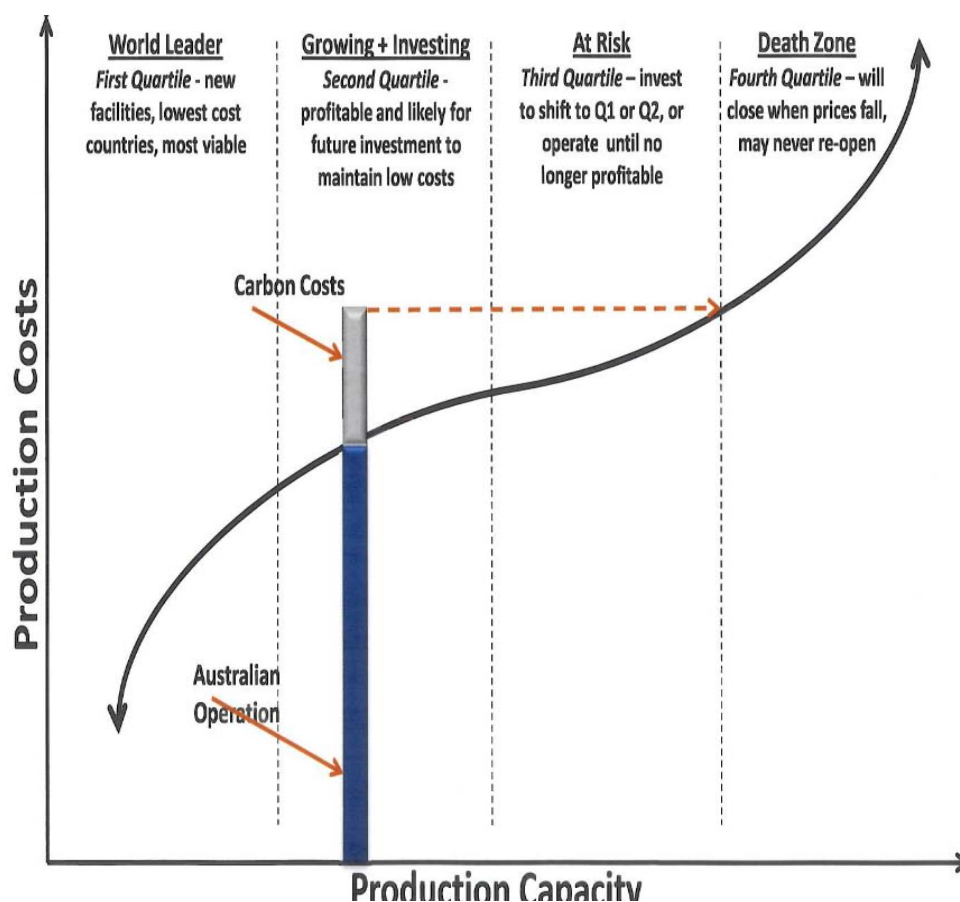
Mr Prosser: Eighty per cent of our product is exported. Like a lot of industries exposed to those international markets, the Australian dollar is making it a harder environment at the moment than it would at other times. Despite that, these facilities can be confident that they could compete in global markets. As to the magnitude of what is being proposed, it would be sufficient in 2012 to shift these facilities up the global cost curve, but looking out over investment time frames it would make it very difficult for those owners to invest in those facilities. Without sustaining investment it is a matter of time before there would be some closures in the industry.⁵⁵

53 Mr Miles Prosser, Executive Director, Australian Aluminium Council, *Committee Hansard*, 17 May 2011, p. 18.

54 Mr Miles Prosser, Australian Aluminium Council, *Committee Hansard*, 17 May 2011, p. 18.

55 Mr Miles Prosser, Australian Aluminium Council, *Committee Hansard*, 17 May 2011, pp 20–21.

Graphic 4.1: Aluminium industry and production costs⁵⁶



4.58 Given the predicament facing Australian industry, the potential movement of investment offshore would most likely be into the Asian region:

Mr McAuliffe: I am happy to provide some figures on this. It is available through analysts and so on, but I will do that. It is part of other stuff that would not be appropriate to share. If you look at aluminium production, in 2000 China had about 12 per cent of global production; in 2010 it has in excess of 40 per cent. To coin a phrase, there is a gorilla in the marketplace. China's growth has been stunning. Of course, that will affect the sorts of dynamics that we were just talking about regarding metal prices.

CHAIR: How does the emissions intensity of aluminium production in Australia compare with the emissions intensity of equivalent aluminium production in China?

Mr McAuliffe: It depends on aspects of the facilities: their age, their technology and also their power supply. I will answer in two parts. If you

⁵⁶ Projections of the impact of a carbon price (4 graphs), tabled by Mr Miles Prosser, Executive Director of the Australian Aluminium Council, at a public hearing in Canberra on 17 May 2011

look at our Western Australian alumina refineries they typically have a carbon footprint of less than half of many of our Chinese competitors.

CHAIR: Less than half?

Mr McAuliffe: Yes. So here in Western Australia we produce alumina at about 0.6 tonnes of CO² per tonne of alumina. Some of the other facilities—not just Chinese—that are growing quickly in developing parts of the world can produce 1.4 tonnes.

CHAIR: So which ones are our biggest competitors? You mentioned China, which has been growing fast, at 40 per cent? Who else?

Mr McAuliffe: China is a key competitor for growth in particular, but as they get bigger and bigger in the marketplace they become just a fundamentally bigger competitor. Other areas include the Middle East, which is growing significantly, but not so much in Europe. America has lost a fair bit of market share, particularly in aluminium.⁵⁷

4.59 The type of possible industry assistance that might be available is uncertain:

At this stage we are being asked to consider the CPRS EITE arrangements as being what is being talked about. We have not seen that as being government policy and we have not seen that as a commitment to it. Can I stress that the costs shown in that third graph incorporate that CPRS EITE measure. Even under the CPRS ET measures we will face a substantially higher carbon cost in Australia than the Chinese producers.⁵⁸

4.60 Following the release of the government's carbon tax on 10 July 2011, the Australian Aluminium Council made a number of scathing observations about the government's initiative to tackle climate change. According to the Aluminium Council:

This imposes a carbon cost on Australian aluminium producers of at least \$60 per tonne of aluminium compared to only \$8 per tonne in China. Australia's carbon cost will rise every year of the scheme and over the next decade to more than \$200 per tonne of aluminium while in China it is not expected to get any higher than \$60.⁵⁹

4.61 The permits provided to the aluminium industry under the carbon tax are lower than under the former CPRS. The allocation of permits may be lower to the industry in future years.⁶⁰ The cost to the industry will be substantial:

57 Mr Tim McAuliffe, General Manager – Climate Strategy and Federal Government Relations, Alcoa of Australia, *Committee Hansard*, 29 April 2011, p. 22.

58 Mr Miles Prosser, Australian Aluminium Council, *Committee Hansard*, 17 May 2011, p. 24.

59 Media release, Aluminium Council of Australia, 'Government locks in cost blow-out for Australian Aluminium producers', 10 July 2011.

60 Media release, Aluminium Council of Australia, 'Government locks in cost blow-out for Australian Aluminium producers', 10 July 2011.

... the total carbon cost to be paid by the aluminium industry will rise from approximately \$120 million in the first year to approximately \$400 million in 2020.⁶¹

4.62 The potential for investment to be hard hit without any environmental benefits is one of the more disturbing features of the government's carbon tax:

That will have a huge impact on investment. Not only will Australia be discounted as a site for new facilities but existing operations will find it hard to attract the capital needed to maintain viability. If we lose that investment, it costs Australia, but global greenhouse emissions don't reduce they are just shifted elsewhere.⁶²

4.63 The harshest impact of the government's carbon tax will fall on regional Australia:

This is putting jobs in Gladstone, Geelong, Hunter Valley, Portland, Tasmania and Western Australia on the line when no other country is exposing their industry to the same risks.⁶³

The steel industry

4.64 Boulder Steel made a submission to the inquiry. It is an Australian publicly listed company.⁶⁴ It plans to build a steel plant at Gladstone in Queensland using blast furnace technology capable of producing 5 million tonnes per annum of steel slabs and billets for export.⁶⁵ The project will create up to 2 000 jobs during construction and 1 800 long-term jobs once the project is in operation.⁶⁶

4.65 Once it is in operation, the steel plant will emit around 9.51 million tonnes of greenhouse gas each year.⁶⁷ Boulder Steel states that this compares favourably with emission rates from the Whyalla and Port Kembla integrated steel plants.⁶⁸

4.66 The steel produced at the plant is for export to the Asia region.⁶⁹ Importantly:

61 Media release, Aluminium Council of Australia, 'Government locks in cost low-out for Australian Aluminium producers', 10 July 2011.

62 Media release, Aluminium Council of Australia, 'Government locks in cost blow-out for Australian Aluminium producers', 10 July 2011.

63 Media release, Aluminium Council of Australia, 'Government locks in cost blow-out for Australian Aluminium producers', 10 July 2011.

64 Boulder Steel, *Submission 70*, p. 2.

65 Boulder Steel, *Submission 70*, p. 2.

66 Boulder Steel, *Submission 70*, p. 2.

67 Boulder Steel, *Submission 70*, p. 2.

68 Boulder Steel, *Submission 70*, p. 2.

69 Boulder Steel, *Submission 70*, p. 2.

The major competitors of Boulder Steel's proposed steel plant are located in jurisdictions that do not impose a carbon tax or similar penalty on carbon dioxide emissions.⁷⁰

...

There is unmet demand for Boulder Steel's future steel production in the Asian region and steel plants in other parts of the world would meet that demand, regardless of their environmental credentials.⁷¹

4.67 In these circumstances, Boulder Steel is concerned with the result as '*[c]arbon leakage is not consistent with the ultimate goal to reduce carbon dioxide emissions on a global scale*'.⁷² (Emphasis in original)

4.68 While the government's Clean Energy Package includes the carbon tax, it also has support for emissions-intensive trade-exposed industries. According to the company, however:

Boulder Steel disagrees with any arbitrary annual decline of free-issue permits unless linked to similar carbon dioxide reduction programs in competing jurisdictions. This decline is particularly inappropriate for a steel plant built with best practice energy and greenhouse gas abatement practices.

...

As there is currently no firm commitment in competitor economies with regard to the reduction of carbon dioxide emissions, it cannot be readily assumed that investors and companies factor in future action in these countries.⁷³

Automotive manufacturing

4.69 The Federal Chamber of Automotive Industries and the Federation of Automotive Products Manufacturers appeared before the committee and expressed some concern about the potential impact of the carbon tax on their members.

4.70 According to these industry associations:

The Australian automotive industry is a highly trade-exposed industry. Currently, more than 80 per cent of all vehicles sold in the Australian market are imported and up to 50 per cent of local vehicle production goes to exports. In addition, \$1.1 billion in components are also sold for export annually.⁷⁴

70 Boulder Steel, *Submission 70*, p. 2.

71 Boulder Steel, *Submission 70*, p. 2.

72 Boulder Steel, *Submission 70*, p. 2.

73 Boulder Steel, *Submission 70*, p. 2.

74 Mr Andrew McKellar, Chief Executive, Federal Chamber of Automotive Industries, *Committee Hansard*, 17 May 2011, p. 58.

4.71 Some 50 000 Australians are employed in the automotive and vehicle manufacturing industries.⁷⁵

4.72 The Australian car industry has 'a significant turnover of one million vehicle sales per year'.⁷⁶

4.73 The two industry associations have undertaken research into the likely impact of a carbon tax on their respective industries. According to the economic research they commissioned:

From that assessment we have calculated that the projected additional costs to the motor vehicle industry would be estimated to be in the order of \$56 million to \$84 million a year based on a carbon price of \$20 to \$30 per tonne. With assistance arrangements based on the emissions-intensive, trade-exposed criteria developed for the CPRS, it is estimated that the cost burden to industry would still be in the order of between \$30 million and \$46 million a year.⁷⁷

4.74 The Australian automotive industry operates in an international market:

The Australian automotive industry is a highly trade-exposed industry. Currently, more than 80 per cent of all vehicles sold in the Australian market are imported and up to 50 per cent of local vehicle production goes to exports. In addition, \$1.1 billion in components are also sold for export annually.⁷⁸

4.75 In these circumstances the potential impact on the industry could be substantial:

Given the trade-exposed nature of the automotive industry there is little or no scope for vehicle or component producers to pass these costs on through the supply chain. Either way, the future viability of the Australian automotive industry is undermined.⁷⁹

4.76 There are other matters that the domestic car manufacturing industry would have to grapple with:

75 Mr Andrew McKellar, Federal Chamber of Automotive Industries, and Mr Richard Reilly, Chief Executive Officer, Federation of Automotive Products Manufacturers, *Committee Hansard*, 17 May 2011, p. 59.

76 Mr Tim Reardon, Director, Federal Chamber of Automotive Industries, *Committee Hansard*, 1 September 2011, p. 60.

77 Mr Andrew McKellar, Federal Chamber of Automotive Industries, *Committee Hansard*, 17 May 2011, p. 58.

78 Mr Andrew McKellar, Federal Chamber of Automotive Industries, *Committee Hansard*, 17 May 2011, p. 58.

79 Mr Richard Reilly, Federation of Automotive Products Manufacturers, *Committee Hansard*, 17 May 2011, p. 59.

CHAIR: If I unpack that and put it in straight language, essentially, if you are a local manufacturer servicing the domestic market, you are going to pay the tax. If you are an importer or an exporter, you do not pay the tax.

Mr Reardon: A low-volume importer, yes; that is correct. So that would be an inequity.

CHAIR: Of the locally manufactured cars, what proportion are sold to the domestic market and what proportion are exported?

Mr Reardon: It varies from year to year. Up to 50 per cent currently—I think it is about 30 per cent of local production—is exported.

CHAIR: But it is essentially distorting the market, so imports will become more competitive as a result of the carbon package and exports will become more competitive. The thing that becomes less competitive is local manufacturing for local supply.

Mr Reardon: Certainly under the carbon tax as a whole that is true. It places an additional cost burden on locally manufactured vehicles and it does not place the equivalent cost burden on imported motor vehicles. Specifically—

CHAIR: Or on exported motor vehicles.

Mr Reardon: Specifically in relation to this particular issue, yes. Imported vehicles under a CPRS model would be coming in with, on average, a lower tax rate than those manufactured locally. A CPRS model would not be our ideal. It would certainly be comparable with the carbon levy in terms of its impact.

CHAIR: But presumably, whether it is domestically manufactured for local supply or for export or whether it is manufactured overseas for import into Australia, the emissions intensity would be pretty similar?

Mr Reardon: Ostensibly identical.

CHAIR: So it seems odd for them to have different treatment, doesn't it?

Mr Reardon: Yes.⁸⁰

Cement industry

4.77 The Australian cement industry:

... employs over 1,800 people and produces over ten million tonnes of cementitious materials, with an annual turnover in excess of \$2.14 billion.⁸¹

4.78 The Cement Industry Foundation (CIF) represents Australia's three major cement producers – Adelaide Brighton, Boral and Cement Australia. There are

80 Mr Tim Reardon, Federal Chamber of Automotive Industries, *Committee Hansard*, 1 September 2011, pp 62–63.

81 Cement Industry Federation, *Submission 33*, p. 2.

currently nine cement manufacturing plants in Australia with an annual turnover of \$2 billion. In 2010, Australia produced 8.5 million tonnes of cement.⁸²

4.79 Cement is important to Australia's modern economy, CIF states, because:

... [it] is a vital commodity for the Australian economy, not only as a critical input for Australia's building and construction industry, but increasingly in resource recovery and reuse innovation – in both cases providing significant economic and social benefits. Competitively priced supplies of cement are essential to Australia's continuing economic growth.⁸³

4.80 Australian cement competes with alternate sources of the product being supplied in the Asia region, specifically south-east Asia and Japan.⁸⁴ This proximity presents challenges given the failure to secure a global agreement on reducing global greenhouse gas emissions:

An important characteristic for the Australian cement industry is that our competitors, almost without exception, are countries in the developing world where there is an unlikely prospect of green house gas (GHG) emissions penalties being imposed.⁸⁵

4.81 The consequences for not supporting the Australian cement industry are that:

As the Australian cement industry has emission intensity second only to Japan in the Asia-Pacific region, and with the emissions from shipping included, delivered cement from Japan would come at a higher CO2 cost.⁸⁶

4.82 The impact on the cement industry would be detrimental while causing emissions to increase:

CHAIR: So to the extent that market share is taken away from producers in Australia and taken by producers in China and other places around the world where there is no price on carbon, the outcome will actually be an increase in global greenhouse gas emissions rather than a reduction?

Mr Leon: Yes, that is absolutely correct.

CHAIR: So we would be putting the cement industry under additional pressure, putting jobs at risk?

Mr Leon: Absolutely.⁸⁷

82 Mr Chris Leon, Chair, Cement Industry Federation, *Committee Hansard*, 8 June 2010, p. 9.

83 Cement Industry Federation, *Submission 33*, p. 2.

84 The Grattan Institute, *Submission 26, Attachment 1*, p. 19.

85 Cement Industry Federation, *Submission 33*, p. 5.

86 Cement Industry Federation, *Submission 33*, p. 5.

87 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mr Chris Leon, Cement Industry Federation, *Committee Hansard*, 8 June 2011, p. 9.

Australia's farming industry

4.83 The Australian agriculture sector is important to the nation and provides opportunities and employment for many in regional and rural Australia. According to the National Farmers Federation (NFF) 'there are 120,941 farms solely dedicated to agricultural production'.⁸⁸

4.84 Australian farming makes a significant contribution to the national economy:

Australian farms and their closely related sectors generate \$155 billion-a-year in production - underpinning 12% of GDP.

Australian agriculture has important linkages with other sectors of the economy and, therefore, contributes to these flow-on industries. Agriculture supports the jobs of 1.6 million Australians, in farming and related industries, across our cities and regions – accounting for 17.2% of the national workforce.⁸⁹

4.85 Under current arrangements:

The National Farmers Federation reinforces its opposition to any carbon tax proposal that places the Australian farm sector's competitive position at risk. While pleased that agriculture has been excluded from the direct impacts of the carbon tax, the NFF maintains its concern about the proposal's potential detrimental impact on the Australian economy and farmers' ability to compete on international markets.⁹⁰

4.86 While farming will not be directly covered by the proposed carbon tax / emission trading scheme, the agriculture sector will still be affected by the new taxation arrangements:

It is sometimes misconstrued that because agriculture's direct emissions have been excluded from the government's carbon pricing plans the sector will be unaffected. This could not be further from the truth. Up to 45 per cent of a farmer's inputs are either energy or energy dependent—all costs that will increase under the government's plans.⁹¹

4.87 In particular, specific sectors within the agricultural industry are likely to be affected according to the NFF:

... we are price takers in the market. Price increases through the supply chain inevitably come back down the supply chain on to the farmer instead

88 National Farmers Federation website: <http://www.nff.org.au/farm-facts.html> (accessed 31 May 2011).

89 National Farmers Federation website: <http://www.nff.org.au/farm-facts.html> (accessed 31 May 2011).

90 Mr Matthew Linnegar, Chief Executive Officer, National Farmers Federation, *Committee Hansard*, 17 May 2011, p. 1.

91 Mr Matthew Linnegar, National Farmers Federation, *Committee Hansard*, 17 May 2011, p. 1.

of going the other way on to the consumer, and from that perspective we are quite concerned, particularly for industries such as the red meat industry with meat processing and dairy. We export a lot of dried milk powder. That drying process is quite energy intensive. We also feel quite exposed in other things like sugar milling, grain milling and so on.⁹²

4.88 According to the NFF, the agriculture sector is not only trade exposed but it is also a global market characterised by intervention that already undermines the clarity of price signals to producers and consumers:

Not only do farmers export approximately two-thirds of everything they produce; they also do so in the most distorted sector of all international merchandise trade.⁹³

4.89 Following the release of the carbon tax on 10 July 2011, the NFF moved to affirm its opposition to the proposed tax:

... the NFF and our members remain opposed to the carbon tax.⁹⁴

4.90 The impact on the farming sector will be felt, even though it is exempt from the carbon tax:

... independent research by the Australian Farm Institute over recent months has highlighted that additional costs from electricity and other indirect energy related sources will remain embedded in the carbon tax for all Australian farmers.

...

This research shows that even with fuel excluded, the average Australian farmer will still incur an additional \$1,500 a year in costs under a carbon price of \$23 per tonne, eroding their net farm income by 2.4 percent.⁹⁵

4.91 These additional costs will hurt farmers operating in the globalised world of farming:

These costs will erode the competitiveness of the agricultural industry in the domestic and international markets on which we depend.⁹⁶

92 Mr Charles McElhone, Chief Executive Officer, National Farmers Federation, *Committee Hansard*, 17 May 2011, p. 2.

93 Mr Matthew Linnegar, National Farmers Federation, *Committee Hansard*, 17 May 2011, p. 1.

94 Media Release, National Farmers Federation, *Carbon concessions: but still a cost for Australian farmers*, <http://www.nff.org.au/read/2135/carbon-concessions-still-cost-for-australian.html> (accessed 12 July 2011).

95 Media Release, National Farmers Federation, *Carbon concessions: but still a cost for Australian farmers*, <http://www.nff.org.au/read/2135/carbon-concessions-still-cost-for-australian.html> (accessed 12 July 2011).

96 Media Release, National Farmers Federation, *Carbon concessions: but still a cost for Australian farmers*, <http://www.nff.org.au/read/2135/carbon-concessions-still-cost-for-australian.html> (accessed 12 July 2011).

Sub-sectors in the agriculture sector: dairy

4.92 The Australian Dairy Industry Council (ADIC) made representations as a trade exposed part of the economy.

4.93 From the perspective of the ADIC:

Dairy farming and dairy processing are two segments of the one integrated – trade-exposed-value chain.

...

As a result, the majority of costs imposed on to the dairy industry processing sector are expected to be passed back onto farming families and regional communities. The estimated impact of this cost pass back to farm families could be between \$5,000 and \$10,000 per year (subject to the prices set for carbon).⁹⁷

4.94 The ADIC stated in its second Submission, lodged with the committee after details of the carbon tax had been released, that the analysis in its earlier submission was accurate.⁹⁸

4.95 The Australian dairy industry's major trade competitors are New Zealand, the European Union, the United States and Latin America.⁹⁹ The position overseas is that:

... the EU has explicitly acknowledged the risk of 'carbon leakage' for dried milk products by providing free permits for EU processors in this sector within its ETS. This provision represents a real risk for Australian export competitiveness if our firms are subject to different carbon tax arrangements.¹⁰⁰

4.96 The position of the ADIC is clear:

The current *Clean Energy Future Plan* incorporates anomalies that will adversely affect dairy's profitability and competitiveness, not just internationally but also relative to some other agricultural sectors. We believe change to mitigate these anomalies is essential to ensure that the passage of the *Clean Energy Bill* and associated legislation does not encourage unnecessarily shifts in dairy production to other parts of the world (carbon leakage) or reductions in dairy production within Australia.¹⁰¹

97 Australian Dairy Industry Council Inc, *Submissions 49 and 94*, p. 2.

98 Australian Dairy Industry Council Inc, *Submission 94*, p. 2.

99 Australian Dairy Industry Council Inc, *Submission 49*, p. 2.

100 Australian Dairy Industry Council Inc, *Submission 49*, p. 3.

101 Australian Dairy Industry Council Inc, *Submission 94*, p. 5.

The need for a global agreement – the need for a level playing field

4.97 Submissions and evidence provided by witnesses to the committee referred to the absence of a global agreement to reduce carbon emissions as exposing important sectors of the Australian economy to a loss of competitiveness, investment and jobs. The clear message was that carbon leakage was a real threat.

4.98 The new Secretary to the Treasury agreed when giving evidence before the committee:

As was made clear in the context of the Carbon Pollution Reduction Scheme, it does not serve anyone's interests if you make decisions that essentially export emissions offshore. So in designing the previous scheme, and this has been made clear in the Multi-Party Climate Change Committee's set of principles, government will need to be conscious of impacts on both competitiveness and environmental effectiveness.¹⁰²

4.99 The committee considers that the government has failed to meet that test set by the Treasury Secretary shortly after taking on his new role earlier this year. The carbon tax, as put forward by the government, will reduce Australia's international trade competitiveness, making overseas emitters not facing a carbon tax more competitive, helping them take market share away from even the most environmentally efficient equivalent businesses in Australia, and, shifting emissions overseas, is not effective action on climate change but an irresponsible act of economic self-harm.

Committee comment

4.100 Australia's past and future prosperity relies on the important role of emissions intensive trade exposed industries, yet it is these industries which stand to be severely damaged by the introduction of a carbon tax.

4.101 The nation's prosperity is based on a resource endowment that is highly carbon-intensive. Moreover, and importantly, much of that carbon-intensity is not amenable to simple or obvious technological solutions – for instance, there is little that can be done to reduce fugitive emissions in mining. In these circumstances acting without global agreement poses significant risks to the economy.

4.102 The government's plan imposes an impost on the competitiveness of all Australian businesses, without the same impost being imposed on our competitors. This will shift economic activity from Australia to countries without a carbon tax or an emissions trading scheme. The evidence provided to and gathered by this committee confirms this. As the Productivity Commission recently reported 'no country currently imposes an economy-wide tax on greenhouse gas emissions or has in place an economy-wide ETS'.

102 Dr Martin Parkinson, Secretary, Department of the Treasury, *Committee Hansard*, 24 March 2011, p. 3.

4.103 To reduce emissions in Australia in a way that just shifts them overseas into areas where there will be no carbon tax and where emissions will be higher for the same economic output is pointless.

4.104 The carbon tax will have a substantial impact on Australia, given that our economy is based around access to relatively cheap fossil fuels. Many Australian jobs are based in industries that are carbon-intensive because our inexpensive access to hydrocarbons is an advantage Australia has in international markets.

4.105 Some of the hardest hit industries and towns from the carbon tax will be the electricity and mining industry in the La Trobe Valley, the automotive industry in Geelong and Adelaide and the steel industry in Whyalla, the Illawarra and the Hunter Valley.

4.106 In addition, these communities are often at the frontline of the so-called 'two-speed' or 'patchwork' economy. After becoming more internationally competitive and resourceful from the opening up of the Australian economy, they are seeing hard won markets disappear due to a higher dollar and higher input costs, partly exacerbated by the mining boom. Imposing a carbon tax on top of these pressures threatens to kindle an already smouldering situation.

4.107 Accordingly, the carbon tax has the potential to undermine the hard-fought acceptance of the economic reforms that have broadly benefited the Australian economy over the past 30 years. Such a reaction can already be seen in the calls for renewed industry assistance to the steel and manufacturing industries. Large scale renewal of the industry assistance would be a retrograde step.

4.108 Nonetheless, imposing a carbon tax now gives renewed potency to those who would seek to reimpose such protections.

4.109 The committee considers that the evidence is clear – there is no environmental gain to be experienced through the introduction of a carbon tax in the absence of global agreement on climate change. Not only is there no environmental gain but the imposition of such a tax in the absence of global agreement and a level playing field is economic recklessness – it will damage Australia's international competitiveness and drive industry and investment offshore.

Chapter 5

The energy sector under the carbon tax

Introduction

5.1 This chapter provides an overview of the energy sector in Australia, its role in the Australian economy, and importance to employment. The role of power stations in regional employment is of particular concern in regard to the introduction of the carbon tax and the proposed closure of brown coal-fired generators.

5.2 The effect of the government package on the energy sector will also be a focus of this chapter. In general terms the government package will lead to an increase in energy prices for which it will attempt to compensate some households. It will provide compensation and assistance measures to certain generators.

5.3 However, it will not adequately compensate regional areas and communities for the effects of unemployment created by the closure of power stations and cut backs to energy generation and coal mining in certain areas, as distinct from the coal export industry. Nor, according to evidence put before the inquiry, will it compensate all power companies for its effects equally.

5.4 The government believes its package will change the energy sector in Australia in quite fundamental and lasting ways. Apart from the closure of at least two brown coal-fired power stations (to be discussed below), the Prime Minister, the Hon. Julia Gillard MP, has asserted that:

The carbon price will change Australia's electricity generation by encouraging investment in renewable energy like wind and solar power, and the use of cleaner fuels like natural gas.¹

5.5 These comments understate the significant challenges faced by Australia's electricity generation sector in the short and medium term as it deals with the implications of the carbon tax. They ignore the impact the carbon tax will have on electricity prices and potentially on energy security.

The energy sector in Australia

5.6 Australia is the ninth largest energy producer in the world, and accounts for around 2.4 per cent of world energy production. Around 68 per cent of domestic energy production in 2008-09 was exported, with the remaining amount going towards domestic consumption.²

1 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, Foreword, p. v.

2 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

5.7 The Australian energy sector has been reliant upon the main Australian produced fuels, which in 2008-09 included:

- coal, which accounted for 54 per cent of total Australian energy production ;
- uranium, which accounted for 27 per cent;
- natural gas, which represented 11 per cent;
- crude oil and liquefied petroleum gas (LPG), accounting for 6 per cent; and
- renewable energy sources, which accounted for 2 per cent.³

5.8 The Australian energy industry has historically been highly dependent on the availability of coal for the generation of electricity. Around 75 per cent of Australia's electricity is from coal-fired generation, largely as a result of the availability of low-cost high-quality coal.⁴ It should be noted that Tasmania primarily depends on hydro-electricity for its energy needs.

5.9 The coal and petroleum industries play a significant role in the Australian economy, in 2008-09 contributing \$68 billion to industry value added, which accounts for 5.7 per cent of the Australian total.⁵

5.10 A further \$19 billion was contributed to the industry gross value added by the electricity and gas supply industries.⁶

5.11 The Energy Supply Association of Australia (ESAA) is the peak industry body representing electricity and downstream natural gas businesses. It told the inquiry that the businesses it represents :

... own and operate some \$120 billion in assets, employ over 52,000 people directly and contribute \$16 billion directly to the nation's gross domestic product each year.⁷

5.12 According to information from the Australian Bureau of Statistics, energy related industries employ around 103 000 people. A breakdown of the areas of employment was provided by the Department of Resources, Energy and Tourism in May 2011, and follows in Table 5.1.

3 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

4 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 72.

5 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

6 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

7 Mr Brad Page, Chief Executive Officer, Energy Supply Association of Australia, *Committee Hansard*, 8 June 2011, p. 1.

Table 5.1 Energy-related industries in Australia 2008-09⁸

Industry	Employment
Coal mining	34 000
Oil and gas extraction	12 000
Petroleum and coal product manufacturing	7 000
Electricity supply	48 000
Gas supply	2 000
Total	103 000

5.13 The Senate Select Committee on Fuel and Energy noted the White Paper in its interim report *The CPRS: Economic cost without environmental benefit*. It also noted that the Electricity Sector Adjustment Scheme would provide economic assistance through allocation of permits to the most emissions-intensive generators.⁹

5.14 The committee received evidence from ESAA at a hearing which highlighted the significance of a well-designed and implemented carbon plan to the economy, and the risk of a poorly-implemented system:

A well-designed emissions trading scheme must be efficient, effective and equitable in the long term and, importantly, must ensure a smooth and orderly economic transition in the short- to medium-term. Failure to ensure an orderly transition could have widespread and potentially long-lasting adverse economic impacts for Australia.¹⁰

Carbon pollution and the energy sector

5.15 The energy sector is Australia's largest source of greenhouse gas emissions, and Australia had the 'highest polluting electricity sector of all OECD [Organisation for Economic Co-operation and Development] countries' in 2008, releasing an average of 0.88 tonnes of carbon dioxide emissions for every megawatt hour of electricity generated.¹¹ This is in contrast to other developed nations such as the United States

8 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 2.

9 Senate Select Committee on Fuel and Energy, *The CPRS: Economic cost without environmental benefit*, May 2009, p. 132.

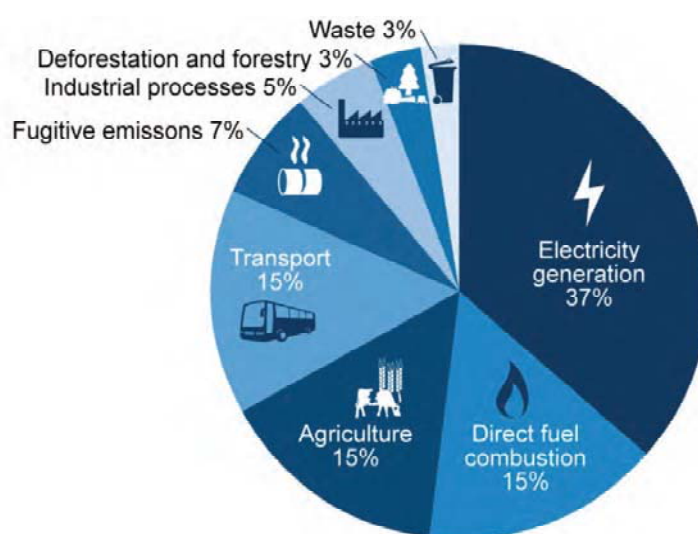
10 Mr Brad Page, Chief Executive Officer, Energy Supply Association of Australia, *Committee Hansard*, 8 June 2011, p. 1.

11 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 72.

and Canada, which produced 0.54 and 0.18 tonnes respectively,¹² though it is important to note here that both the US and Canada have access to low emissions nuclear energy as part of their energy mix.

5.16 Figure 5.1 indicates that electricity generation is responsible for over a third of Australian carbon dioxide emissions.

Figure 5.1 Australia's carbon emissions profile¹³



Source: 2009 emissions from the National Greenhouse Gas Inventory 2011, DCCEE analysis.

5.17 Treasury modelling further indicates that emissions from electricity generation and other stationary energy sources – such as emissions from fuel consumption for electricity generation, fuels consumed in the manufacturing, construction and commercial sectors and in domestic heating – are expected to increase by 8% and 33% respectively from 2010 to 2020.¹⁴

5.18 Following the introduction of the government's climate change plan, according to Treasury modelling, electricity generation and other stationary energy

12 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 72.

13 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 13.

14 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 13.

sources would be responsible for 60% of emission reductions in the period 2010 to 2050.¹⁵

5.19 In addition, the government's package made it clear that they intended to shift electricity consumer's behaviour at both a domestic and commercial level by raising the cost of electricity.

5.20 It should be noted that there are hundreds and thousands of small and medium businesses across Australia that will not receive assistance under the government's scheme. Many of these businesses are energy intensive and cannot become more efficient. However, at the same time, they will not be in a position to fully pass on their additional costs down the supply chain. These are costs that these businesses will have to absorb.

5.21 The manufacturing sector in Australia is already struggling under an uncompetitive exchange rate and a substantial drop in international competitiveness. The introduction of a carbon tax will compound these problems even further.

Government assistance package

The Energy Security Fund

5.22 As part of the government's announced carbon tax plan, an assistance package for the electricity industry will be established. This assistance package incorporates a \$5.5 billion Energy Security Fund, which is designed to 'smooth the transition and maintain energy security'. The Energy Security Fund is comprised of two initiatives: one, payment for closure and, two, transitional assistance measures.¹⁶

Payment for closure

5.23 The first initiative deals with the government's proposed payment for closure of 2000 megawatts (MW) by 2020. The purchase of 2000MW of highly emissions-intensive coal-fired generation is intended to commence the replacement of coal-fired energy assets with other, lower-emission alternatives.¹⁷

15 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 82.

16 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

17 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

5.24 The program will be implemented by the Department of Resources, Energy and Tourism, which will call for expressions of interest from eligible generators.¹⁸ The source of funding for the program is discussed in Chapter 8.

5.25 The timeframe for the payment for closure program has been designed to aid in the negotiation of the closure of Australia's most emissions-intensive coal-fired generation capacity. The closure is intended to allow investment in lower-emission plants.¹⁹

5.26 As stated in the government's carbon tax plan:

Closing existing generation capacity in an orderly way will promote energy security. This is because knowing when old capacity will shut down is valuable information for potential new investors.²⁰

5.27 The role of market security was highlighted by the government in their carbon tax plan:

Giving more confidence to investors is an important part of ensuring our transition to a clean energy future occurs. Providing better information to the market about when new capacity is required means that new investment will be made in a timely manner, underpinning energy security.²¹

5.28 Two plants were flagged for closure by the Hon. Martin Ferguson AM MP, Minister for Resources, Energy and Tourism, at a Melbourne University conference in June 2011 – the Hazelwood plant in the Latrobe Valley, Victoria and the Playford plants in Port Augusta, South Australia. Mr Ferguson was quoted in the media as saying that a carbon price would require the closure of existing coal generators to encourage investment in lower-emission power sources.²²

5.29 In a media release issued by the Australian Greens after the carbon tax announcement, the Deputy Leader of the Australian Greens, Senator Christine Milne,

18 Joint Media Release, the Hon. Martin Ferguson, AM MP, Minister for Resources, Energy and Tourism and the Hon. Greg Combet, AM MP, Minister for Climate Change and Energy Efficiency, 'Expressions of Interest Called for Contract to Close', 30 September 2011, <http://minister.ret.gov.au/MediaCentre/MediaReleases/Pages/ExpressionsofInterestCalledforContracttoClose.aspx> (accessed 5 October 2011).

19 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

20 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, pp 74-75.

21 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

22 Adam Morton and Michelle Grattan, 'Death-knell for 'dirty' Hazelwood', *The Age*, 1 July 2011, <http://www.theage.com.au/victoria/deathknell-for-dirty-hazelwood-20110630-1gt7t.html>, (accessed 12 July 2011).

stated that the payment for closure scheme would 'deliver the first steps in Australia's important and exciting transformation from coal to renewable energy'.²³

5.30 The National Generators Forum (NGF) commented on the contracts for closure program in its submission to the Department of Climate Change and Energy Efficiency on the Clean Energy Legislative Package.²⁴

5.31 It accepted the government's rationale for the program and felt that it 'may give new investors welcome certainty on the timing of market demand for new plant'. However, the NGF was critical of the fact that only four generators meet the 'arbitrary' threshold of 1.2 t/MWh of power. This meant that the tender process was not sufficiently competitive. The NGF argued that the process should be based on the cost per tonne of abatement for closure of the generator.²⁵

5.32 It also felt the government needed to release details of how the program is to be implemented, including the timing of closures.²⁶

5.33 Funding for the contracts for closure is discussed in more detail in Chapter 8 of the Report.

5.34 The role of the Hazelwood and Playford power plants in regional employment will be discussed below.

Transitional assistance measures

5.35 The second initiative of the Energy Security Fund comprises the provision of assistance to coal-fired power stations which are highly emissions-intensive. The assistance will have conditions attached with regard to security of supply and the transition to lower-emission energy sources.²⁷

5.36 Assistance will be provided to generators that stand to incur significant asset value losses. The conditions attached to the assistance measures include the obligation to meet system security requirements, and to make public clean energy investment plans. The investment plans will be required to include:

23 Australian Greens, *The transformation from coal to renewable energy starts today*, media release, 10 July 2011, <http://greens.org.au/content/transformation-coal-renewable-energy-starts-today>, (accessed 14 July 2011).

24 National Generators Forum, *Submission 122*, at <http://www.climatechange.gov.au/government/submissions/clean-energy-legislative-package/~media/government/submissions/cel/public/CEL-Submission-NationalGeneratorsForum-20110922-PDF.pdf> (accessed 22 September 2011).

25 National Generators Forum, *Submission 122* on the Clean Energy Legislative Package, p. 5.

26 National Generators Forum, *Submission 122* on the Clean Energy Legislative Package, p. 6.

27 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

... proposals to reduce pollution from existing facilities and to invest in research and development and new capacity. Information on possible projects identified under the Energy Efficiency Opportunities program will also be included in these plans.²⁸

5.37 The assistance will be in the form of a limited free allocation of carbon permits and cash, which will be allocated until 2016-17. The estimated cost of this program will be \$5.5 billion, which is around 23 per cent of the expected liability for coal-fired power stations.²⁹

5.38 Problems with the compensation offered by the Energy Security Fund was raised by representatives of Loy Yang Power in its submission to the committee and its evidence on 16 September 2011. To give some perspective, Loy Yang Power operates both a brown coal mine in the La Trobe Valley of Victoria and the largest power station in the state.³⁰ It is not eligible for the contracts for closure program.³¹

5.39 Loy Yang Power produces annual emissions of around 19.5 million tonnes. A carbon price of \$23 per tonne will impose an additional \$450 million in costs in the first year of the scheme alone.³² That amount will, of course, increase as the cost of carbon per tonne increases during the fixed price period.

5.40 In its evidence, Loy Yang Power indicated that the government's carbon tax scheme will:

... place pressure on our cash flows, make our refinancing of existing debt more difficult, may cause compliance problems with financial services licences and may lower the creditworthiness of the company.

...

Whilst the scheme will ensure energy security in the short term, it falls short of appropriately compensating generators for business value losses. ... Given the high carbon intensity of brown coal electricity generation, such generators will not be able to pass on their full costs of emissions. ... Over its whole-of-life performance, our modelling shows that Loy Yang Power suffers a significant deterioration in business value, which may impact on the operations of the business in the medium to long term.³³

28 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

29 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

30 Mr Kenneth Thompson, Executive General Manager, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 24.

31 Mr Kenneth Thompson, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 27.

32 Loy Yang Power, *Submission 98*, p. 2.

33 Mr Kenneth Thompson, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 24.

5.41 A new Energy Security Council will be able to advise the government on support measures for strongly affected generators. This includes the provision of advice regarding the offer of a loan to emissions-intensive coal-fired electricity generators. This measure has been announced to ensure market security and stability, and is in recognition of the 'difficult borrowing conditions faced by coal-fired generators'.³⁴

5.42 The loan would be offered to a generator for the 'refinancing of existing debt where a coal-fired generator needs finance but is unable to obtain it from the market on reasonable terms'.³⁵

5.43 Brown coal-fired generators have been reported to have had difficulty in securing funding for the refinancing of debts due to uncertainty in the energy sector surrounding the impact of the carbon tax. Senior Vice-President of Moody's Investors Services, Mr Terry Fanous, stated that the uncertainty has lingered since the announcement of the carbon tax:

There are a number of factors that will play out before the banks have all the elements they need to make an informed decision ... The sector will receive strong compensation but it won't perfectly neutralise the impact of the carbon price. There will be residual concerns that lenders will have about the sector.³⁶

5.44 Loans would also be offered for the purchase of future vintage carbon permits, for a limited time, and on terms which would encourage generators to seek alternative, private finance.³⁷

Assistance for black coal-fired generators

5.45 As brown coal-fired generators are more emissions-intensive, it is expected that they will claim the majority of the \$5.5 billion Energy Security Fund, while black coal-fired generators may not be eligible for any compensation. State-owned black coal-fired generators will be strongly impacted by the carbon tax without receiving any transitional assistance.³⁸ The NSW Minister for Resources and Energy, The Hon. Chris Hartcher MP, was reported in the media to have said that the carbon tax would

34 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

35 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

36 Jonathan Shapiro, 'Power station refinancing risk persists', *The Australian Financial Review*, 13 July 2011, p. 11.

37 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

38 Lenore Taylor and Phillip Coorey, 'Carbon tax on coal hits NSW coffers hard', *Sydney Morning Herald*, 12 July 2011, <http://www.smh.com.au/environment/climate-change/carbon-tax-on-coal-hits-nsw-coffers-hard-20110711-1hax7.html>, (accessed 12 July 2011).

have a negative effect on NSW government revenue.³⁹ This is also addressed in more detail in Chapter 8 of the Report.

5.46 Both Macquarie Generation and Verve Energy explained to the Committee that they would not receive any benefits from the transitional assistance measures. For example, Mr Skelton of Macquarie Generation, speaking after the announcement of the government's package, stated:

... the brown coal generators in Victoria actually are going to access reasonable levels (of) assistance. They will say that it is not enough, and they have probably got a point but we get nothing.⁴⁰

5.47 This view is supported by a submission to the Committee from the NSW Treasury:

... the thresholds for eligibility for all forms of assistance under the current scheme ... are based on emissions intensity levels that are set too high to include any NSW coal-fired generators. Macquarie Generation – which will be one of the biggest losers in the country from the introduction of a carbon price - will not be eligible for any assistance.⁴¹

and analysis commissioned by the Victorian government:

A study by economic consultants ACIL Tasman has concluded that the state's dirtiest power producers are in line to get \$5.22 billion worth of cash payments and free permits out of a total \$5.4 billion national compensation pool announced to ensure no generator is forced to close so rapidly that it risks electricity supply.⁴²

Initial industry reactions

Energy Supply Association of Australia

5.48 Industry body ESAA expressed their 'mixed' reaction to the release of the government's plan for introduction of a carbon tax. In a media release, the Chief Executive Officer stated that while there were positive elements for the future of the stationary energy industry, they have concerns about the transition.

39 Lenore Taylor and Phillip Coorey, 'Carbon tax on coal hits NSW coffers hard', *Sydney Morning Herald*, 12 July 2011, <http://www.smh.com.au/environment/climate-change/carbon-tax-on-coal-hits-nsw-coffers-hard-20110711-1hax7.html>, (accessed 12 July 2011).

40 Mr Russell Skelton, Chief Executive Officer, Macquarie Generation, *Committee Hansard*, 22 July 2011, p. 1.

41 New South Wales Treasury, *Submission 81*, p. 14.

42 Josh Gordon and Tom Arup, 'Victorian power firms to get 97% of carbon compo', *The Age*, 19 July 2011, <http://www.theage.com.au/victoria/victorian-power-firms-to-get-97-of-carbon-compo-20110718-1h1r8.html> (accessed 16 August 2011).

For nearly five years esaa has called for the implementation of an efficient, equitable and enduring emissions trading scheme.

The announcements today satisfy many of esaa's principles for such a scheme, but important questions remain to be answered.

...

But, it is immediately apparent some significant issues remain for the industry.⁴³

5.49 The positive elements of the announcement, in the view of ESAA, centred on:

An improved set of arrangements for the delivery of new renewable energy technologies and the commitment for a single, national set of arrangements to address energy efficiency obligations for energy retailers.⁴⁴

5.50 ESAA is, however, concerned with the aspects of the announced tax which deal with the delivery of secure energy supplies in a competitive and stable manner:

This proposed assistance may mean a few electricity generators are less financially impaired compared to the Carbon Pollution Reduction Scheme, however, a significant number of generators under this arrangement will receive nothing, but still see their asset values diminished.

This sends an unfortunate signal to investors about the security of investing in Australian energy assets.⁴⁵

5.51 ESAA also expressed concern about the effect of the carbon tax on profits, which it was believed could not be passed on, in full, to customers, despite the government package including assistance to households. Commenting on the Carbon Pollution Reduction Scheme, ESAA stated in its submission to the Committee that 'without full costs pass through to retail prices, the viability of retailers and the entire energy supply industry is at risk'.⁴⁶

National Generators Forum

5.52 The Executive Director of the NGF, Mr Malcolm Roberts, expressed a concern regarding the possible expansion of the Energy Efficiency Opportunities program. Mr Roberts was quoted in the media as saying:

43 Energy Supply Association of Australia, *Mixed news for the energy sector in the carbon price package*, media release, 10 July 2011.

44 Energy Supply Association of Australia, *Mixed news for the energy sector in the carbon price package*, media release, 10 July 2011.

45 Energy Supply Association of Australia, *Mixed news for the energy sector in the carbon price package*, media release, 10 July 2011.

46 Energy Supply Association of Australia, *Submission 60*, p. 11.

The carbon price will be the incentive for businesses to find energy efficiencies. Filling in forms and paying consultants will not yield any more energy savings.⁴⁷

5.53 The NGF made more detailed comments on the exposure drafts of the Clean Energy Plan legislation once they were released in a letter sent to all Members of Parliament and its submission on the legislation.⁴⁸ Its criticisms, as highlighted in its letter, included:

- the government's carbon tax plan will cost the generation sector \$40 billion, which will largely be passed on to consumers;
- however, this will result in a change to the industry's emissions of only 3.5% to 2020, based on Treasury's own modelling;
- the starting carbon price of \$23 per tonne is higher than prices elsewhere but still well below the \$60 per tonne which Treasury states is required to lead to a switch from coal to gas fired power. This is an important factor as, below \$60, there is no environmental gain from the carbon price;
- there will not be the certainty needed for long-term investment because of the lack of emissions targets to 2020;
- the plan offers no genuine assistance to electricity generators, even though it requires generators to bear most of the burden of emissions reduction by covering only 62% of greenhouse gas emissions. This is particularly so for black-coal fired power generators in New South Wales, Queensland and West Australia compared to brown-coal fired power generators in Victoria and South Australia; and
- the plan will force up prices by requiring generators to purchase carbon permits in full and in advance for electricity covered by forward contracts and should include deferred payment arrangements.⁴⁹

Energy Users Association of Australia

5.54 In a media release issued by the EUAA after the carbon tax announcement, Executive Director, Mr Roman Domanski referred to the tax as a 'bitter-sweet pill for

47 Annabel Hepworth, 'Coal-fired compo to leave us exposed, energy users warn', *The Australian*, <http://www.theaustralian.com.au/national-affairs/carbon-plan/coal-fired-compo-to-leave-us-exposed-energy-users-warn/story-fn99tjf2-1226091028358>, (accessed 13 July 2011).

48 Letter from National Generators Forum to all Members of Parliament, 15 September 2011, and *Submission 122* on the Clean Energy Legislative Package.

49 Letter from National Generators Forum to all Members of Parliament, 15 September 2011.

Australia's energy consumers'.⁵⁰ A number of concerns were raised, particularly in relation to the delivery of assistance to businesses.

5.55 Mr Domanski stated in the media release that the carbon price would 'significantly increase electricity and gas prices' which would impact on cost of living expenses:

The EUAA estimates that the \$23 per tonne of CO₂ carbon price will add around \$20 per Mega Watt hour to the price of electricity next year, an increase of around 50 per cent on current wholesale electricity prices and at least 10-20 per cent on top of retail electricity prices.⁵¹

5.56 The EUAA also expressed concerns that rising industry costs would be passed on to consumers, and that competitive business would be harmed:

The extra cost will be passed on by businesses and find its way into higher consumer prices. Businesses that compete internationally would be hard pressed to pass on the extra costs and risk losing competitiveness, with flow-on impacts to investment and jobs.⁵²

5.57 Mr Domanski continued that the flow-on impacts may extend to other industries, which could include food processing, foundries, chemical and plastics manufacturers and small businesses which are involved in the international market.

Evidence of electricity generators to the committee

5.58 Macquarie Generation is owned by the New South Wales government and is the largest generator of electricity in Australia. On 22 July 2011, its Chief Executive, Mr Russell Skelton, told the committee:

Even in the federal Treasury modelling, they show a fairly substantial reduction in profitability for both brown and black coal generators – and that is as a consequence of us not being able to pass through the full cost.⁵³

5.59 Ms In't Veld stated that whether Verve Energy could pass on the cost increase to customers depended on its bilateral contracts:

50 Energy Users Association of Australia, *Carbon price announcement and energy consumers*, media release 07/11, 10 July 2011.

51 Energy Users Association of Australia, *Carbon price announcement and energy consumers*, media release 07/11, 10 July 2011.

52 Energy Users Association of Australia, *Carbon price announcement and energy consumers*, media release 07/11, 10 July 2011.

53 Mr Russell Skelton, Chief Executive, Macquarie Generation, *Committee Hansard*, 22 July 2011, p. 2.

... there is ambiguity in the clauses ... and at this stage we are not entirely clear on our ability to pass on. We expect that we may not be able to pass it all on.

...

In the event that we are able to pass on the increase in our production costs to our customers, this would ultimately mean either an increase in tariffs or an increase in the current state government subsidy to Synergy, the state's biggest retailer.⁵⁴

5.60 One point made by Ms In't Veld was that the effect of the government's package on Western Australia, which is not part of the National Energy Market, is potentially worse than on the other states for two reasons:

One, we need the coal diversity for security reasons, so we need to retain coal-fired plant. Two, our gas price is that much higher than the eastern states currently.⁵⁵

5.61 In relation to the profitability of Macquarie Generation, Mr Skelton stated:

Since 1996 ... we have paid \$2.2 billion in dividends, taxes and guarantee fees to the New South Wales government

...

(The carbon tax) will increase our costs in the first year by about \$580 million. Based on all the analysis and modelling that we have done, we are going to have to absorb a fairly substantial proportion of that – somewhere between \$115 to \$230 million. Obviously that means that our profit will reduce substantially and potentially be eliminated.⁵⁶

5.62 On the profitability of Verve Energy, Ms In't Veld, stated:

If a carbon tax came in at \$20 a tonne ... we would be subject to an annual additional increase in our production costs of some \$160 million. If it went up to \$25 a tonne it would be an over \$200 million per annum increase in our production costs. That would be an additional more than 20 per cent increase in our costs every year.⁵⁷

54 Ms Shirley In't Veld, Managing Director, Verge Energy, *Committee Hansard*, 29 April 2011, p. 1.

55 Ms Shirley In't Veld, Verge Energy, *Committee Hansard*, 29 April 2011, p. 4.

56 Mr Russell Skelton, Macquarie Generation, *Committee Hansard*, 22 July 2011, p. 1.

57 Ms Shirley In't Veld, Verge Energy, *Committee Hansard*, 29 April 2011, p. 1.

5.63 Based on the last financial year, she believed that a 20% increase in prices would wipe out Verve Energy's profit.⁵⁸

5.64 Ms In't Veld explained that a carbon price between \$20 and \$30 would not be enough of an incentive to transition to cleaner energy sources:

The modelling that we have done and that others have done indicates that at the current coal prices we have under our existing contract with Wesfarmers, and assuming a gas price of about \$8 a gigajoule, the carbon tax would have to be about \$60 to \$70 a tonne before there would be any incentive for us to move from coal plant to combined cycle gas plant.⁵⁹

5.65 She also doubted the environmental benefit of a \$20 to \$30 carbon price:

CHAIR: From what you have described for Western Australia, a price on carbon—a carbon tax, as is envisaged—in the \$20 to \$30 range, we are told, is going to push up the cost for you, but it is not actually going to result in a reduction in emissions.

Ms In't Veld: That is correct; it will have no impact whatsoever.

CHAIR: You talk about whether you are able to pass those costs on or not. If you are not able to pass those costs on, where does—

Ms In't Veld: That will mean that we will not have as much cash available for maintenance and upgrades, which in the longer term does threaten reliability—your plant starts to run down a bit. In the case of Verve Energy, we are still carrying in excess of \$1 billion in debt, so it will also mean that we will neither be in a position to start paying down that debt nor be in a position to pay the dividends to our owners, the state government. Also, depending on how high the tariff goes, there could be potential impairment issues, which would mean that we would need to be bailed out by the state.⁶⁰

5.66 Evidence given to the inquiry by Loy Yang Power in relation to the Clean Energy Fund is discussed above. The important point to note is that Loy Yang Power believes the government's carbon tax plan will affect its business greatly, in ways other than its bottom line. Loy Yang Power did state that it supported 'the establishment of a well-designed and well-implemented carbon-pricing mechanism ... whilst maintaining investor confidence and security of supply'.⁶¹

58 Ms Shirley In't Veld, Verve Energy, *Committee Hansard*, 29 April 2011, p. 2.

59 Ms Shirley In't Veld, Verve Energy, *Committee Hansard*, 29 April 2011, p. 1.

60 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Ms Shirley In't Veld, Verve Energy, *Committee Hansard*, 29 April 2011, p. 2.

61 Mr Kenneth Thompson, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 24.

5.67 Loy Yang Power's primary concern about the implementation of the carbon tax is that it does not provide for deferred settlement of payments for carbon permits. It estimated that an electricity generation business 'will need to hold positions well in excess of \$10 billion at any one time' to meet their permit obligations. It described this situation as 'financially stressful for all liable parties, prohibitive in some cases, and impossible in others, given arrangements with financiers'.⁶²

5.68 Speaking outside the inquiry, AGL chief economist, Paul Simshauser, stated that '[p]roject financing in Australia has become a lot more problematic'.⁶³ We're a bit of an anomaly globally'. He believed that the ongoing uncertainty caused by the fierceness of the debate over the government's carbon tax has lifted debt costs for investors in the power generation industry. He is quoted in the article as stating:

The cost of project finance and the tenure of the debt just seems to be elevated in terms and cost and shortened in terms of length compared to overseas. The fact that you do have uncertainty over policy directions and there is a real cost in conflicting signals.⁶⁴

5.69 Mr Simshauser felt this uncertainty would continue until the emissions trading scheme began. He was confident, however, that Australia's power requirements would be met, just that the cost of meeting them would increase.

5.70 Submissions on the impact of the carbon tax on the West Australian energy market were received from Griffin Energy. Griffin Energy is a generator and seller of energy, operating the Bluewaters Power Stations 1 and 2, the first privately owned, coal-fired power stations in West Australia.⁶⁵ These are two of the newest and comparatively cleanest coal-fired power stations in the country, built to replace the ageing Muja AB and Kwinana B power stations, supplying about 18% of West Australia's power.⁶⁶

5.71 Griffin Energy agrees with Verve Energy's submissions that the West Australian power industry will not receive assistance under the government's clean energy plan, as it is a black coal-fired energy market.⁶⁷ As black-coal fired energy generators, West Australia's power stations are much less emissions-intensive than east coast brown-coal power generators. There has always been an understanding that

62 Loy Yang Power, *Submission 98*, p. 2.

63 Mark Ludlow, 'Carbon debate lifts debt costs: economist', *Australian Financial Review*, 20 September 2011, p. 7.

64 Mark Ludlow, 'Carbon debate lifts debt costs: economist', *Australian Financial Review*, 20 September 2011, p. 7.

65 <http://www.griffinenergy.com.au/default.aspx?MenuID=76> (accessed 29 September 2011).

66 Interview, Paul Murray and .Senator Mathias Cormann, MP, *Mornings with Paul Murray*, 6PR, 26 August 2011.

67 Griffin Energy, *Submission 44a*.

power generators would be adequately compensated for any loss of asset value arising from the imposition of a carbon tax.

5.72 This situation raises concerns about what Griffin Energy perceives as some perverse policy outcomes that will be produced by the carbon tax in the West Australian energy market. One is that it may lead to an increased intensity in carbon emissions.

5.73 This is a particular problem for West Australian energy security. As it is not a part of the National Energy Market, there are no easily substitutable energy suppliers, unlike on the east coast. As a result the West Australian government will be forced to utilise the Muja AB and Kwinana B power stations.

5.74 Griffin Energy has put the situation this way:

Based on the expectation that no new private coal fired power stations will be built in the WEM – a result of financiers struggling to overcome sovereign risk issues due to existing investments being impaired by no (or inadequate) compensation – the state government, by way of the state owned generation utility, is recommissioning the previously retired Muja AB power station in Collie. Muja AB is one of the oldest and most emission intensive power stations in Australia. Its refurbishment will not improve its emissions intensity to any comparable level of an efficient new technology coal fired facility and it will be brought back into operation as one of the highest CO₂ emitting power stations in the country. In terms of emissions reduction and transitioning the economy away from older emission intensive technology, this represents a perverse policy outcome.⁶⁸

5.75 It suggests that emissions from the Muja AB power station 'will be almost twice the level of the newest coal fired facility in the Collie region'.⁶⁹

5.76 An even more perverse outcome may result from a combination of the carbon tax and the lack of assistance to West Australia power generators.

5.77 The construction of the Bluewater power stations was financed before the global financial crisis, through local and international project finance banks. Those contracts were entered into with an understanding that federal and state government policies would provide 'eligible coal fired generators (with) assistance equal to a "disproportionate loss in asset value"'.⁷⁰ Based on that scenario, Griffin Energy states:

Without the assistance contemplated at the time of contracting and securing finance, Griffin's financial model will show that it is in breach of its debt covenants. It is anticipated that foreign lenders will use the breach to be able to exit the loan facility (and the Australian market more generally). Any

68 Griffin Energy, *Submission 44*, p. 2 and *Submission 44a*.

69 Griffin Energy, *Submission 44*, footnote 2, p. 2.

70 Griffin Energy, *Submission 44a*.

new finance arrangement (coupled with the carbon price) is expected to destroy any residual equity value in the assets. The power stations – the newest in the country – will effectively be the first in Australia to 'fail' under the carbon price legislation.⁷¹ [emphasis added]

5.78 In August 2011 Griffin Energy made submissions about these issues, directly to the government. It met with the Hon. Martin Ferguson AM MP, Minister for Resources, Energy and Tourism, but was only able to meet with advisers to the Prime Minister, the Hon. Julia Gillard MP, and the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet, MP. It has described the response it received from the federal government:

Upon laying out our concerns the response we received was pretty standard across the board; we don't really care; this is the legislation; you may be an unexpected casualty in the implementation of this legislation but we are not really prepared to talk about assisting you.

...

The way one of the Treasury officials put it to me ... the government's policy is to transition the economy; there will be casualties on the way to doing so and unfortunately you're a casualty.⁷²

5.79 The Committee believes that the decision by the federal government not to adequately compensate the West Australian power companies, in the same way it is compensating their Victorian equivalents, ignores the fact that West Australia is not a part of the National Energy Market, to that state's great disadvantage. This has significant implications for the energy security of West Australia, as well as being likely to result in an increase in its carbon emissions, moving forward.

5.80 In Queensland, it has been reported that:

The State Government's electricity-generating companies posed combined losses of almost \$1.1 billion in the 2010-11 financial year, almost all of it due to the Federal Government's planned

CS Energy, Stanwell Power and Tarong Energy were forced to write down the value of their coal-fired power stations by hundreds of millions of dollars because of the proposed \$23-a-tonne carbon price.

...

Treasurer Andrew Fraser said the asset write-downs would be partially offset by a \$490 million increase in the value of gas and hydro assets.⁷³

71 Griffin Energy, *Submission 44a*.

72 Interview, Paul Murray and Wayne Trumble, General Manager, Griffin Energy, *Mornings with Paul Murray*, 6PR, 3 October 2011.

5.81 The Queensland power generators are unlikely to receive compensation for these losses from the government, for the same reason as their other, non-Victorian counterparts.

Regional employment and small business

5.82 Witnesses and submitters to the inquiry expressed their concern regarding employment in regional areas and the effect the carbon tax would have on small business in Australia.

5.83 The effect on regional economies and employment levels is explored below, in particular focussing on the Hazelwood power station and mine; and Playford power stations, including Leigh Creek township.

Hazelwood power station and mine

5.84 The Hazelwood Mine in the Latrobe Valley produces around 18 million tonnes of brown coal annually, which fuels the power station. The power station has a capacity of 1675MW, and supplies up to 25 per cent of Victoria's electricity.⁷⁴ The plant currently directly employs 500 staff, and has 300 alliance contractors.⁷⁵

5.85 Mr Tony Concannon, Chief Executive of International Power, the owner of the Hazelwood plant, has stated that a phased closure would be considered.⁷⁶ He also stated that International Power would enter into negotiations with the government regarding the phased closure in order to remove uncertainty.⁷⁷

5.86 The job losses incurred through the closure of the plant would have a significant impact on the local community and economy. The Prime Minister, the

73 Robert MacDonald 'CS Energy, Stanwell Power and Tarong Energy write down value by combined losses of almost 4.1 billion due to proposed carbon tax' *Courier-Mail*, 1 October 2011, <http://www.couriermail.com.au/news/queensland/cs-energy-stanwell-power-and-tarong-energy-write-down-value-by-combined-11-billion-due-to-proposed-carbon-tax/story-e6freoof-1226154446349> (accessed 5 October 2011).

74 International Power, *Hazelwood Power Station and Mine*, <http://www.ipplc.com.au/the-company/assets/hazelwood-power-station-and-mine/>, (accessed 12 July 2011).

75 International Power, *Hazelwood Power Station and Mine*, <http://www.ipplc.com.au/the-company/assets/hazelwood-power-station-and-mine/>, (accessed 12 July 2011).

76 A. Morton and M. Grattan, 'Death-knell for 'dirty' Hazelwood', *The Age*, 1 July 2011, <http://www.theage.com.au/victoria/deathknell-for-dirty-hazelwood-20110630-1gt7t.html>, (accessed 12 July 2011).

77 T. Arup, 'Power plants agree to hold buyout talks', *Sydney Morning Herald*, 11 July 2011, <http://www.smh.com.au/environment/climate-change/power-plants-agree-to-hold-buyout-talks-20110710-1h920.html>, (accessed 12 July 2011).

Hon. Julia Gillard MP, was quoted in the media as saying that the government would work with communities to lessen the impact of closures.⁷⁸

5.87 Senator Milne, Deputy Leader of the Australian Greens, stated in a press release that the Greens would work to ensure that communities would be supported:

The Greens, the government and the independents are absolutely committed to making sure workers and communities who currently rely on coal are helped through this transformation with structural adjustment support of some \$200 million.⁷⁹

5.88 Senator Milne stated that staff and communities directly affected by the closure of Hazelwood power plant would be assisted:

Partial closure of coal power plants like Hazelwood could begin immediately, with the necessary support for workers and communities.⁸⁰

Playford power stations

5.89 The Playford power stations at Port Augusta are part of the Flinders Power portfolio of Alinta Energy, along with the Northern power station. The Playford stations have a capacity of 240MW. They make up the smaller capacity stations of the portfolio.⁸¹ The Northern and Playford stations, along with the Leigh Creek Coalmine, township and railway, provide more than 30 per cent of South Australia's energy.⁸²

5.90 The Playford stations were acquired in November 2006, but were commissioned in 1963 and are fuelled by brown coal from the Leigh Creek Coalfield, also owned and operated by Alinta.⁸³ The Leigh Creek township has a population of 600.

78 ABC News, 'Gillard says energy secure under carbon tax', *Australian Broadcasting Corporation*, 12 July 2011, <http://www.abc.net.au/news/stories/2011/07/12/3267838.htm>, (accessed 12 July 2011).

79 Australian Greens, *The transformation from coal to renewable energy starts today*, media release, 10 July 2011, <http://greens.org.au/content/transformation-coal-renewable-energy-starts-today>, (accessed 14 July 2011).

80 Australian Greens, *The transformation from coal to renewable energy starts today*, media release, 10 July 2011, <http://greens.org.au/content/transformation-coal-renewable-energy-starts-today>, (accessed 14 July 2011).

81 Alinta Energy, *Flinders*, <http://alintaenergy.com/assets/generation/flinders/>, (accessed 13 July 2011).

82 Alinta Energy, *Annual Report*, 2009-10, p. 12.

83 Alinta Energy, *Flinders*, <http://alintaenergy.com/assets/generation/flinders/>, (accessed 13 July 2011).

5.91 Alinta employs more than 750 people across Australia and New Zealand, and operates ten power generation businesses.⁸⁴ Alinta also provides gas and electricity to commercial, industrial and retail customers in Australia.⁸⁵

5.92 It has been reported widely in the media that Playford power stations are likely to be targeted for payment for closure by the government. Alinta has confirmed that it will put up the Playford stations for closure.⁸⁶

5.93 The South Australian Minister for Energy, Mr Michael O'Brien MP, stated in an interview that the Playford B station would be decommissioned:

The Commonwealth have actually made it quite plain that Playford B will have to be decommissioned. It is actually one of two plants. The other is Hazelwood in Victoria. Those two plants will be closed by way of a contract for closure.

Alinta have indicated to me that the Commonwealth want the contract for closure for Playford B signed relatively quickly and Alinta are quite happy with this because it means that they can then get on with the work of procuring the replacement gas plant.⁸⁷

5.94 The Mayor of Port Augusta, Ms Joy Baluch, expressed concern regarding the future of the town, and at the uncertainty residents face.

This Rann Government and series of governments before have had at least 20 years to consider an alternative energy, be it gas or thermal solar. But they have done nothing about this.⁸⁸

5.95 The Chief Executive Officer of South Australia's Chamber of Mines and Energy, Mr Jason Kuchel, highlighted the implications of the payment for closure of the Playford stations:

In this case of course it's not just about shutting down a power station but also about shutting down potentially a mine, a rail and an entire town.⁸⁹

84 Alinta Energy, *Welcome*, <http://alintaenergy.com/>, (accessed 13 July 2011).

85 Alinta Energy, *Annual Report*, 2009-10, p. 1.

86 T. Arup, 'Power plants agree to hold buyout talks', *Sydney Morning Herald*, 11 July 2011, <http://www.smh.com.au/environment/climate-change/power-plants-agree-to-hold-buyout-talks-20110710-1h920.html>, (accessed 12 July 2011).

87 Mr Michael O'Brien, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

88 Ms Joy Baluch, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

89 Mr Jason Kuchel, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

5.96 A small business owner from the Leigh Creek township has also expressed concern for the future of the town stated:

I think people will not like to see the demise of the town and who knows what's going to happen down the track?

Because Leigh Creek is here wholly and solely to get the coal out to send to Port Augusta it would have a devastating effect on the town if it's not needed.⁹⁰

5.97 The inquiry received a particularly well-researched and thoughtful submission from the Moe and District Residents Association Inc (MADRA) addressing the snowball effects of the closure of brown-coal fired power stations on its region. The Committee has no reason to believe other regional economies where brown-coal fired power stations are major employers would not suffer similar problems.

5.98 MADRA estimated that the Moe region has an unemployment rate three times higher than the national average.⁹¹ Its submission went on to consider the probable effects of the closure of the Yallourn and Energy Brix power stations, which are under discussion as part of the contracts for closure program:

On the long held basis that each power industry job has a multiplier effect in the regional economy of 2.6 other jobs, we estimate that closure of these power stations will cause a minimum 4,000 total job loss within our region.⁹²

5.99 In MADRA's view, the government had not given any consideration to addressing these expected job losses. Instead, it believes the government 'has channelled its efforts into assuaging mining and other interests around Australia, even though modelling of a carbon tax on those sectors has revealed little significant negative impact'.⁹³ Accordingly, it rejected the government's plans to close brown-coal fired power stations 'without any firm commitments to redeploy affected workers into new, technology-based jobs created in this region'.⁹⁴

Committee comment

5.100 The committee takes the view that the introduction of the proposed carbon tax puts Australia's energy security at risk.

90 Ms Desley Wardell, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

91 Moe and District Residents Association Inc, *Submission 99*, p. 3.

92 Moe and District Residents Association Inc, *Submission 99*, p. 1.

93 Moe and District Residents Association Inc, *Submission 99*, p. 2.

94 Moe and District Residents Association Inc, *Submission 99*, p. 7.

5.101 The introduction of the carbon tax will increase the cost of electricity for families and although the government has indicated that compensation will be paid to families, those families whose livelihoods are lost as a result of the loss of jobs will need more than the proposed \$10.10 per week to cover their increased cost of living.

5.102 The committee also considers that the government's compensation package will not be sufficiently adequate for regional areas and communities that will struggle with greater social displacement as a result of power station closures and cut backs to energy generation and mining.

Chapter 6

Regional Australia

Introduction

6.1 Chapter 6 provides an overview of the government's proposed carbon tax and economic modelling in the context of regional Australia. It examines the impact that the proposed carbon tax will have on rural and regional areas.

Background

6.2 Through the introduction of a carbon tax, the government will seek to change consumer behaviour, the result being a reduction in Australia's emissions:

Pricing carbon will drive structural change in the economy, moving resources towards less emission-intensive industries. Many of Australia's industries will maintain or improve their competitiveness in a carbon constrained world.¹

6.3 The government has modelled the impacts of the proposed carbon tax at the international, national, state, industry and household level. While that modelling assumes full employment even with a carbon price it identifies that:

While aggregate economic costs are small, they vary across regions and sectors, reflecting changes in Australia's comparative advantage in a low-emission world. Precise impacts vary depending on the emission intensity of a state, **region** or sector, and the opportunities to diversify into low-emission goods and production processes.² [emphasis added]

6.4 In presenting their modelling to government, Treasury noted that:

Regions heavily reliant on emission-intensive sectors, such as some resource processing and emission-intensive manufacturing, may be the most strongly affected over the longer term.³

6.5 Treasury advised the committee that modelling they have undertaken cannot accurately identify the effect that the imposition of a carbon tax will have on regional Australia.

1 Department of the Treasury, *Strong Growth, Low Pollution – Modelling a carbon price*, Overview, 2011, p. 1.

2 Department of the Treasury, *Strong Growth, Low Pollution – Modelling a carbon price*, Overview, 2011, p. 8.

3 Department of the Treasury, *Strong Growth, Low Pollution – Modelling a carbon price*, Overview, 2011, p. 8.

Senator XENOPHON: On the issue of regional effects, from what I have seen of the modelling, there does not appear to be any regional effects modelling done of the carbon price. Is that a fair assumption?

Ms Quinn: The analysis that we have put in the public domain includes analysis down to the state level... It does not go below that, except for some additional information on the electricity generation around the Latrobe Valley.

Senator XENOPHON: Why wasn't that done? You used the MMRF model—correct?

... And the MMRF model does include a regional module.

... And you did not use that in this case?

Ms Quinn: It has data at a regional level but it does not have behavioural components of modelling. So it does not allow for the changes of capital, labour and technology at a sub state, regional level ...

It is available for people to use if they choose — ... and the Australian Treasury has chosen not to because we do not think that it is robust, and putting information in the public domain that we do not believe is robust has consequences and we do not think it would be consistent with our charter.⁴

Previous government regional modelling exercises

6.6 Treasury's claim that the regional modelling is "not robust" would appear to contradict the practice of other government agencies which conduct general equilibrium modelling of major reforms. For example, both the Productivity Commission and the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) have performed such modelling recently.

6.7 In 1999, the Productivity Commission used an earlier version of the MMRF model used by Treasury to report on the effects of National Competition Policy on rural and regional Australia. They used the MONASH-RR model to estimate the impact of National Competition Policy on 57 separate regions in Australia. Indeed, the Productivity Commission believed that the results were 'robust' enough to use them in their headline finding that 'only one of the 57 regions modelled is estimated not to benefit from NCP in terms of output.'⁵ (Coincidentally, that one region was the La Trobe Valley, a region again facing the disproportionate impact of the carbon tax.)

6.8 In 2002, the Productivity Commission used an earlier version of the MMRF model to estimate the output and employment impacts of lowering assistance to the automotive industry on different regional areas. These results found that the largest

4 Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division, Department of the Treasury, *Proof Committee Hansard*, 23 September 2011, p. 1.

5 Productivity Commission, *Impact of Competition Policy Reforms on Rural and Regional Australia*, Report no. 8, 1999, AusInfo, Canberra, p. xxxix.

negative impacts would be felt in the Adelaide, Outer Adelaide, Melbourne, Geelong and Illawarra regions.⁶

6.9 In 2003, the Productivity Commission used an earlier version of the MMRF model to estimate the output and employment impacts of lowering assistance to the textiles, clothing and footwear industry on different regional areas. These results showed that the largest negative impacts would be felt in the Geelong, Wimmera, Melbourne, Ballarat, Bendigo, Albany, Albury and Gippsland regions.⁷

6.10 In 2005, the Productivity Commission used an earlier version of the MMRF to repeat the modelling of the impacts of National Competition Policy (NCP) that it performed in 1999. The results were once again reported for 57 different regions.⁸

6.11 In 2007, the Productivity Commission used the MMRF model to estimate the regional impacts of the proposed infrastructure related components of the National Reform Agenda reforms in 54 different regions. It is telling that this is the same basic model that Treasury used to estimate the effect of the carbon tax on the Australian economy. The Productivity Commission, while noting limitations, believed that conclusions could be drawn from the regional modelling:

Subject to data limitations, it is possible to make some broad observations about the likely impacts of the competition and regulatory reform streams on regions, that is, before the impact of government spending decisions on regional activities.⁹

6.12 In 2010, the (then) Assistant Treasurer, Senator, the Hon. Nick Sherry, asked the Productivity Commission to report on the impacts and benefits of COAG reforms. In the Terms of Reference the Assistant Treasurer stated:

The Commission will develop and maintain analytical frameworks appropriate for the quantification of the impacts and benefits of reform, and the provision to government and the community of assessments of the economy-wide, **regional** and distributional effects of COAG's reform agenda. The frameworks should be transparent, and subject to independent assessment. As far as practicable, the frameworks should be made available for wider use.¹⁰ (emphasis added)

6 Productivity Commission 2002, *Review of Automotive Assistance*, Report No. 25, Canberra, p. 314.

7 Productivity Commission 2003, *Review of TCF Assistance*, Report No. 26, Canberra, p. 279.

8 Productivity Commission 2005, *Review of National Competition Policy Reforms*, Report No. 33, Canberra.

9 Productivity Commission 2006, *Potential Benefits of the National Reform Agenda, Report to the Council of Australian Governments*, Canberra, p. 28.

10 Productivity Commission 2010, *Impacts and Benefits of COAG Reforms: Reporting Framework*, Research Report, Canberra, p. v.

6.13 It is notable that not only has the government not reported the regional effects of the carbon tax, it also has not subjected its modelling to “independent assessment” or ensured that its modelling frameworks are available for wider use.

6.14 In its framework report on the impacts and benefits of COAG reforms, the Productivity Commission confirmed that it would report the regional effects of its modelling:

A common economy-wide model will be used to quantify the aggregate, regional and distributional effects of economic outcomes and those environmental and social outcomes that affect economic activity. The model will be similar to that used by the Commission on four previous occasions to illustrate the potential impacts of widely-based national reform: in 1995 for Hilmer and related reforms; in 1999 for a smaller range of NCP reforms of particular relevance to rural and regional Australia; in 2005 to report on the economic and distributional consequences of NCP reforms; and in 2006 to report on the potential benefits of COAG’s embryonic National Reform Agenda.¹¹

6.15 In 2011, the Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES) published modelling results of the economic and social effects of the proposed Murray-Darling Basin Plan. ABARES used its Water Trade Model to estimate the impacts of the Plan on 22 regional areas throughout the Murray-Darling Basin.¹²

6.16 In 2011, ABARES released modelling of the potential effects of climate change on forests and forestry in Australia, stating:

This integrated study drawing together climate modelling, forest growth, economic analysis and community vulnerability assessments is an important step toward understanding the effects of climate change on forest industries at a regional and subregional level.¹³

Committee comment

6.17 The Committee believes there is no reasonable explanation as to why the government has refused to publish similar modelling results on the impact of the carbon tax on rural and regional Australia. If respected economic agencies, such as the Productivity Commission and ABARES, can publish regional modelling results for

11 Productivity Commission, *Impacts and Benefits of COAG Reforms: Reporting Framework*, Research Report, Canberra, December, 2010, p. xvii.

12 ABARES, *The economic and social effects of the Murray–Darling Basin Plan: recent research and next steps*, 2011.

13 ABARES, Potential effects of climate change on forests and forestry in Australia, August, 2011, http://adl.brs.gov.au/data/warehouse/pe_abares20110824.01/CCforest_Synthesis_National_2011_HR.pdf. (accessed on 4 October 2011).

other government policy initiatives, then there is no reason that the Treasury cannot do the same for the carbon tax.

6.18 The Committee is of the view that the government does not want rural and regional Australia to know what the impact of the carbon tax would be according to Treasury modelling.

6.19 The government should of course require Treasury to conduct proper modelling of the carbon tax impact on rural and regional Australia.

Third-party modelling of the impact of the carbon tax on regional areas

6.20 Although the Commonwealth Government has not released regional modelling results of the carbon tax, state governments in Queensland, New South Wales and Victoria have done so.

6.21 In Queensland, the Labor State Government released modelling on 23 August 2011 of the carbon tax undertaken by the Queensland Government's Office of Economic and Statistical Research¹⁴. The results of this modelling indicate that parts of regional Queensland will be the epicentre of the carbon tax negative impact on future prosperity. The Rockhampton and Gladstone area will see economic activity fall by 8.2 per cent under a carbon tax, the Mackay area by 5.7 per cent, double to triple the impact of the carbon tax on the rest of Australia¹⁵.

Table 6.1: Impacts of carbon pricing on statistical division activity output, across Queensland as a cumulative per cent deviation from business as usual¹⁶

Brisbane	-2.5
Gold Coast	-3.2
Sunshine Coast	-3.3
West Moreton	-0.4
Wide Bay Burnett	0.8
Darling Downs	1.8
South West	2.6
Fitzroy Central West	-8.2
Mackay	-5.7
Northern	1.7
Far North	1.1
North West	-2.1

14 Queensland Government, *Carbon Price Impacts for Queensland*, 2011, August.

15 Senator Barnaby Joyce, *Government must clean on carbon tax's impact on regional Australia*, Media release, 23 August 2011

16 Queensland Government, *Carbon Price Impacts for Queensland*, 2011, August, p.31

6.22 In New South Wales, the State Government released modelling of the carbon tax on 4 August 2011. That modelling, by Frontier Economics, showed that the carbon tax would cost 31,000 jobs, at least 26,500 of which would be lost in regional Australia. The Hunter region would lose 18 500, the Illawarra would have 7,000 fewer jobs and the Central West 1,000 fewer jobs.¹⁷

6.23 The Victorian Government released modelling on 20 September 2011. The modelling by Deloitte Access Economics showed that there would be 7,073 fewer jobs in regional Australia under the carbon tax by 2015. This included 1,574 fewer jobs in the Geelong area and 1,251 fewer jobs in the La Trobe Valley area.¹⁸

6.24 The Commonwealth Government has made various criticisms of State Government modelling. However, it has not released its own modelling of the regional impacts of the carbon tax to disprove the broad and consistent finding that the carbon tax will have a disproportionate impact on regional Australia. The Commonwealth Government's criticisms would have more credibility if it made its modelling available for others to scrutinise its parameters and assumptions.

6.25 It is not surprising that the regional modelling that has been released finds a disproportionate impact on regional Australia. A disproportionate share of Australia's power generation, mining and manufacturing industry resides in regional Australia, so the carbon tax would be expected to hit regional Australia disproportionately.

Evidence from local regional communities

6.26 Given the lack of regional modelling that has been undertaken by the Commonwealth government, the committee sought evidence from a number of organisations and stakeholders in rural and regional areas to assist its inquiry into the impact of the proposed tax and the effectiveness of the government's compensation package for this sector of the economy.

6.27 Evidence heard by the committee suggests that the effort required to meet the expectation that industries will have to 'evolve'¹⁹ to keep pace with the government's clean energy future will be of greater consequence in rural and regional areas as local business and industry struggle to adapt. The evidence also suggests that the government's proposed compensation package has been inadequately targeted and that many rural and regional businesses will in fact be worse off than their multinational competitors.

17 Frontier Economics, *Carbon price modelling, prepared for the NSW Government*, August, 2011.

18 Deloitte Access Economics, *Modelling the Clean Energy Future policy*, September, 2011.

19 Department of the Treasury, *Strong Growth, Low Pollution – Modelling a carbon price*, Overview, 2011, p. 9.

Regional New South Wales

6.28 Modelling was prepared on behalf of the New South Wales Government²⁰ to look at the impact of the proposed carbon tax not only in New South Wales, but across Australia. That modelling found the following:

- 'The most adversely affected regions (taking into account both reference case growth and the impact of the carbon price) are Hunter NSW, Gippsland Victoria, Northern SA, Illawarra NSW, Fitzroy Qld and Central West NSW. In all cases the carbon price results in slower growth in output rather than absolute declines on current levels. The loss in GRP is \$820m in Hunter NSW, \$250m in Illawarra NSW and \$170m in each of Fitzroy Qld and Central West NSW. In dollar terms these effects are less than the impacts on Sydney and Melbourne but in relative terms these effects are generally larger.'²¹
- 'In Hunter NSW, this effect is large in absolute and relative terms, and equivalent to 18,500 jobs. The Illawarra in NSW is also negatively affected by the carbon price (approximately 7,000 jobs) though given that the reference case growth is stronger the net effect is slower growth rather than a contraction on current levels.'²²

6.29 By 2030, when the carbon price is higher and assistance to emissions intensive trade exposed industries is reduced, the effects are greatest on:

- Hunter NSW (- 42,500, an absolute contraction relative to current levels);
- Illawarra NSW (approximately - 27,400, slower growth in future employment); and
- Fitzroy QLD (approximately 7,400, mostly slower growth in future employment, though this more than offsets projected employment growth between 2010 and 2030)²³. Regional New South Wales

6.30 Regional New South Wales (NSW) covers 800 000 square kilometres and boasts a population of more than 2 519 000.²⁴ Its traditional industries include manufacturing, mining and agribusiness.²⁵

20 Frontier Economics, *Carbon Price Modelling – a report prepared for the NSW Government*, August 2011

21 Frontier Economics, *Carbon Price Modelling – a report prepared for the NSW Government*, August 2011, p.26

22 Frontier Economics, *Carbon Price Modelling – a report prepared for the NSW Government*, August 2011, p.27

23 Frontier Economics, *Carbon Price Modelling – a report prepared for the NSW Government*, August 2011, p.27

24 <http://www.business.nsw.gov.au/invest-in-nsw/regional-nsw> (accessed 18 August 2011).

25 <http://www.business.nsw.gov.au/invest-in-nsw/regional-nsw> (accessed 18 August 2011).

Tamworth – evidence of the impact of the carbon tax

6.31 The committee held a hearing in Tamworth. This is a major inland centre in New South Wales.

6.32 The committee heard from witnesses from the Tamworth Regional Council and Tamworth Business Chamber as well as the following enterprises:

- Inverell Freighters;
- Bindaree Beef;
- Namoi Valley Bricks; and
- Grain Products Australia.

Local business groups

6.33 These enterprises are medium sized with employee numbers ranging from 28 to 630. These witnesses expressed concern about their ability to absorb or pass on costs in rural areas. They also commented that despite the government's proposal for compensation, they remained apprehensive about their continued financial viability and the subsequent impact on employment in the region.

6.34 The Tamworth Regional Council was also of the view that given the geographical situation of the region, businesses in the region will be disproportionately affected:

I have some serious concerns which I would like to reflect on, on behalf of the community, as to this current model that is before us here at this moment. I believe that our regional community, because of its geographical situation, will suffer disproportionately from some costs associated with the tax, particularly from 2014 when the fuel imposts will, I believe, be experienced—I would be surprised if they are not. Another area of disproportionate cost is energy, due to our climate—we have extremes of both hot and cold weather which a lot of coastal communities and larger centres do not. This exposes the great difficulty in imposing a one-size-fits-all solution to compensation from the tax.²⁶

6.35 The Tamworth Business Chamber shared the concerns of the Council, particularly highlighting the strain that increased electricity prices will have:

The impost of a carbon tax, while targeted at the top 500 emitters, will have a devastating effect on a number of small businesses according to local feedback. Since 2008, electricity prices have risen on average by 39 per cent, with a further 17.3 per cent approved from July 2011.

...

26 Councillor Colin Murray, Mayor, Tamworth Regional Council, *Committee Hansard*, 3 August 2011, p. 21.

Regional Australians have to deal with the tyranny of distance and the majority of us expect to pay a little more for products and services. However, these ever-increasing costs are pricing some local retailers and suppliers out of the market. While it can be argued that the government intends to keep the diesel fuel rebate until 2014, what happens after that? After that we believe transportation costs will go up. It will cost us more to have our product delivered to markets and more to have products we want delivered to us.

...

It is naive to say that this tax is targeted at the 500 biggest emitters as the compensation the government is offering to taxpayers will not cover all increases in costs.²⁷

6.36 These same concerns in relation to increased operating costs and continued economic viability were repeatedly raised by the witnesses who appeared before the committee in Tamworth. Those businesses and their views are outlined in the following pages.

Inverell Freighters

6.37 Inverell Freighters expressed concern about increases in fuel costs. Inverell Freighters operate a fleet of 25 prime movers as well as eight other trucks. The business employs 40 people²⁸ and has an annual turnover of \$12 million.²⁹ The owner, Mr Keri Brown, noted that it was an already difficult operating market with many small operators going out of business.³⁰ The further impost of a carbon tax will make it even more difficult to remain competitive. Mr Brown stated that it would be difficult for Inverell Freighters to absorb a carbon tax and there would be little likelihood of it being passed onto customers:

Any equitable tax or charge on industry is certainly harder to absorb in a rural area due to our cost pressures, which are also placed on our customer base. Our customer base is primarily rural, and we all know the problems that rural people have and how difficult it is for them to receive any increase in cost. In some ways, being the size of transport business that we are, we are like farmers; we are price takers. In our business, we are sometimes dictated to as to what costs have to be absorbed.³¹

6.38 Mr Brown also explained to the committee that although the imposition of the carbon tax on diesel has been deferred to enable them to prepare for the transition;

27 Mr Timothy Coates, President, Tamworth Business Chamber, *Committee Hansard*, 3 August 2011, pp 30–31.

28 Mr Keri Brown, Managing Director, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 3.

29 Mr Keri Brown, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 1.

30 Mr Keri Brown, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 1.

31 Mr Keri Brown, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 1.

they are in fact a 'sitting duck' as there is little that they can do to further reduce their emissions:

... by its very nature, it [the carbon tax] is designed to inflict pain on us in order to make us change our ways and our patterns of use. This is the nub of the problem, and it is why I have a real problem with it. What can we as a company do? Absolutely nothing. If a carbon tax is imposed on us, we can do nothing. We are a sitting duck. We just pay the tax and try and pass it on. Nothing in our pattern of usage can change. We are unable to effect any changes whatsoever.³²

6.39 Inverell Freighters anticipates that as a result of the carbon tax its fuel costs will increase by \$350,000 per year. Mr Brown explained his concern to the committee that, in an industry already experiencing slim profit margins, the additional impost may be the 'straw that breaks the camel's back':

CHAIR: So if you put a \$350,000 additional cost on top of less than zero what does that do to you?

Mr Brown: You ring Ritchie Brothers, the auction house, and put all your stock through that. Seriously, that is where it goes. As a typical small business one of the issues you constantly face—we have had to face this challenge over the last three years—is whether you eventually pull the pin. But you have loyal staff who have been great to you. It is their livelihood as well. You just cannot pull the plug on them. I have my son sitting at the back of the room today. This is what he wants to do for a living. Those are the sorts of pressures that you have, which are non-business pressures. You cannot tip out these people who have been loyal to you over such a number of years and say: 'Sorry, I'm pulling the pin. Send it off to Ritchies, the big auction house.' How much did we say it was?

Senator WILLIAMS: \$350,000.

Mr Brown: With another \$350,000 it is goodbye.³³

Bindaree Beef

6.40 Bindaree Beef Pty Ltd is a privately owned and family operated company; it is one of Australia's largest beef processing and exporting businesses. The business now operates one plant at Inverell in northern NSW and is a major local employer. It employs 630 full time equivalent staff.³⁴ The business directly injects in excess of \$64 million into the town of Inverell per annum.³⁵

32 Mr Keri Brown, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 1.

33 Mr Keri Brown, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 6.

34 Mr Phillip Kelly, Chief Financial Officer, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 13.

35 Mr Phillip Kelly, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 13.

6.41 Bindaree Beef Pty Ltd expressed concern that the cost burden that will be introduced as a result of a carbon tax will negatively affect the long-term viability not only of Bindaree Beef but also the broader beef industry. Mr Phillip Kelly, Bindaree Beef's Chief Financial Officer, explained to the committee that under a carbon tax, although Bindaree Beef has already taken action to reduce their energy usage, electricity would remain a major cost and a cost which they expect would rise by 17 per cent – or \$1.6 million per year:

Our annual electricity cost is about \$3.2 million. My projected figures over the next two years are an increase of \$1.6 million, so that will take our annual electricity costs to \$4.8.³⁶

6.42 Mr Kelly explained that under the government's proposed compensation package, Bindaree Beef would not receive any assistance:

Mr Kelly: A critical issue that everyone needs to be aware of is that because of our turnover we fall into the large business categories, so we fall outside the net of typical government funding support programs.

CHAIR: So you do not get any compensation under the carbon tax?

Mr Kelly: No.³⁷

6.43 Bindaree Beef explained that it is seeking to implement measures that will reduce its costs including their electricity usage; as a private company their ability to modernise its plant and equipment is hampered. This contrasts with the situation of its three major competitors who are likely to be included in the top 500 emitters and who are therefore likely to receive some assistance through direct government support:³⁸

Senator WILLIAMS: I want to take you to your competitors—Swift, Cargills, Teys Bros. I know Teys Bros are up for \$2 million under the carbon tax alone, let alone their electricity and extra fuel et cetera. Are you saying that because they are amongst the top 500 they will get some compensation from the government?

Mr Kelly: Given that they are multinational companies, some shareholder driven with one in particular backed by a government bank and another a very diverse multinational and multicommodity company, they have access to funding arrangements and so forth that we unfortunately do not. As a small family-owned business, we face issues like the banking industry in Australia not banking meat-processing businesses. We are fortunate we have got a very good relationship with our existing banker. The other impost, which I have spoken about before, is that we fall outside of the net when it comes to government funding programs because we are classed as a large business.

...

36 Mr Phillip Kelly, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 12.

37 Mr Phillip Kelly, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 12.

38 Mr Phillip Kelly, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 13.

Senator WILLIAMS: Have you had any indication whatsoever that there may be some financial assistance from the government when they collect this carbon tax money to help you through your transition or to help you to compete?

Mr Kelly: There is nothing that I have seen so far in the information I have been given which indicates that Bindaree Beef will qualify for any support.³⁹

6.44 Mr Kelly expressed to the committee the difficulty of the industry as price takers. He indicated that Bindaree Beef would try to absorb as much of the impact of a carbon tax but ultimately they would need to pass on the costs to their customers, the cattle producers:

As a business we try to absorb as much of any cost increase we can. Ultimately, that gets passed on to our customers. Our customers of livestock are cattle producers. Cattle producers are facing enough problems in the Australian industry at this point in time. They can ill afford to suffer any decrease in income. It is an absolute furphy that agriculture will be exempt from any carbon tax. Primary producers, as the ultimate price takers, are at the end of the line and primary producers will take on board increased costs in their business, either through direct increased costs or lower prices for their commodities.⁴⁰

6.45 Like Inverell Freighters, Bindaree Beef also suggested that the added impost of a carbon tax may be the 'backbreaker' for their business:

Mr Kelly: The impact of the carbon tax on Bindaree Beef could possibly be the backbreaker.

Senator CAMERON: Are you serious about that?

Mr Kelly: I am deadly serious. I am very passionate about it because I protect 630 employees, I protect the viability and economic long-term viability of the township of Inverell, I protect the cattle producers who provide us with cattle and I protect the beef industry.⁴¹

Namoi Valley Bricks

6.46 Namoi Valley Bricks (NVB) is a family owned company that has operated since 1959. At present, NVB employs 28 staff, 26 in Gunnedah and two in Sydney. The company also engages several transport contractors. NVB has an annual turnover of \$4.5 million and operates on thin profit margins, of approximately three per cent.⁴²

39 Senator John Williams, Senate Select Committee on New Taxes and Mr Phillip Kelly, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 16.

40 Mr Phillip Kelly, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 17.

41 Mr Phillip Kelly, Bindaree Beef Pty Ltd, *Committee Hansard*, 3 August 2011, p. 19.

42 Mr Michael Broekman, Owner, Namoi Valley Bricks, *Committee Hansard*, 3 August 2011, p. 39.

6.47 Mr Michael Broekman, owner of NVB, explained to the committee the steps that his family business has taken over the past few years in an effort to meet their carbon responsibilities. He explained their involvement in biodiversity and their commitment to running a clean and efficient organisation which had resulted in their business having emission levels 20 per cent below the national average for brick manufacturing.⁴³ Mr Broekman, however, voiced his concern that the carbon tax, in its current format, is too complicated and does not support businesses in renewable technology:⁴⁴

Over the last few years, as the carbon debate has come to the forefront, we have ... tried to look at ways for our organisation to meet our carbon responsibilities. We have done so by getting involved in biodiversity. We have 400 acres of native bushland locked up for biodiversity needs. We have a policy on using ethanol fuels, looking at trying to get into biodiesel. We have also done an audit on our emissions—an emissions study—and found that our organisation runs at about 20 per cent below the national average in relation to brick manufacturing. We have done that because (1) we have a responsibility and (2) running a clean and efficient organisation means that it should be more profitable.

In recent times we have been looking at solar as an offset against power cost. Our organisation would need to run something like a 200-kilowatt system to be power efficient or power neutral. A 200-kilowatt system would cost us in the vicinity of \$750,000 to implement, which was unaffordable. The repayments on that sort of program would outweigh the cost. So we looked at other options, or other avenues, and ended up coming back down to a 150-kilowatt system, at about \$450,000 worth of infrastructure costs. Again, we cannot get the numbers to add up; we cannot get it to work. But the cost of that renewable energy technology does not allow us to offset against our power.

It is disappointing, because those are the sorts of things we should be doing as a business, and that is what I was hoping to see out of a carbon tax: that businesses like ours could be supported in renewable objectives. So far in the package—which, I admit, I have not had a lot of time to look through to the nth degree—I do not see a lot of incentives for businesses like ourselves to be able to change our ways of doing things with some sort of government support.

...

from what I can see so far, the model that has been put up is full of waste and is not directed at the real cause.⁴⁵

43 Mr Michael Broekman, Namoi Valley Bricks, *Committee Hansard*, 3 August 2011, p. 39.

44 Mr Michael Broekman, Namoi Valley Bricks, *Committee Hansard*, 3 August 2011, p. 39.

45 Mr Michael Broekman, Namoi Valley Bricks, *Committee Hansard*, 3 August 2011, pp 39 – 40.

6.48 Mr Broekman explained that as his business's main competitors are large multinationals, the introduction of the carbon tax will further undermine his company's competitiveness:

Mr Broekman: Our competitors are the multinationals in the building products game—Boral, Austral, CSR, PGH and the like. At the moment, there are only three independent brick makers left in New South Wales...

CHAIR: To the extent that imposing a carbon tax further undermines the competitive position in Australia and makes overseas emitters, often emitting more for the same product, more competitive and helps them take market share, we are not actually resolving the issue, are we? We are not actually reducing global emissions; we are just shifting emissions from Australia to other parts of the world.

Mr Broekman: That is right.

CHAIR: So why would we do that? Why would that be a sensible thing to do?

Mr Broekman: I am not in government, so I do not know why we want to go down this path. That is the argument. My view is that there must be a simpler way of doing this that gives us clear direction and a clear result.⁴⁶

6.49 Mr Broekman, like Inverell Freighters and Bindaree Beef, also expressed a concern about the ability of his business to pass on the cost of price increases to consumers and the effect that will have on his business's profitability:

Senator CAMERON: And when the carbon tax is implemented there is an opportunity then to pass those price rises through, is there not?

Mr Broekman: There is if you have a robust economy, but our business is very much affected by the two-tier economy. The building sector in New South Wales is in a very depressed state and we work in a very competitive environment. At times, over the history of our business, yes, it has happened, but at this stage, with the nature of our industry and the way the economics is running, there would be no chance of passing that on.

Senator CAMERON: All of the analysis that I have seen would lead me to believe that you can pass it on. In fact, one of the things the government has had to do is to provide powers to the ACCC to make sure people do not pass too much on.

Mr Broekman: Again, it is great that the ACCC will get those powers, but I can assure you that, due to the nature of our business and our industry, trying to bring in price increases will be detrimental to our turnover.

Senator CAMERON: What specific increase for 1,000 bricks would be caused by the carbon tax?

Mr Broekman: Again, I am only a small-business owner. I just do not have the resources to work that out. We are a small business in rural New

46 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mr Michael Broekman, Namoi Valley Bricks, *Committee Hansard*, 3 August 2011, pp 39 – 40.

South Wales that struggles to survive on a day-to-day basis. To spend resources to try to work that out is impossible.

Senator CAMERON: The Treasury estimates the overall impact on the economy is 0.7 percent. Do you agree with that?

Mr Broekman: That is right. I have said here earlier that I do not think the carbon tax in its current structure will break our business but it could have a detrimental effect on our bottom line. A one per cent increase in costs could affect our bottom line by at least a third.

Senator CAMERON: But if the public are aware that they are being recompensed for any increase in the cost of bricks then you would be in a position to pass through your increases, would you not?

Mr Broekman: If the industry were not so competitive then yes, you could. But, even with the last wages increase that has just come through, we tried to pass on those costs to our consumers and that has already affected our sales.⁴⁷

Grain Products Australia

6.50 Grain Products Australia (GPA) is a small starch manufacturing plant in Tamworth. It employs 67 permanent full-time employees and 14 casual staff. GPA has annual revenue of \$50 million; one third of that revenue is derived from exports. GPA's annual wheat requirement of 60 000 tonnes is sourced from the region – from farms in the area north-west of Tamworth. GPA uses a local flour mill, which employs 38 staff, to mill its wheat.⁴⁸

6.51 GPA explained that the proposed carbon tax will threaten the future viability of the plant which, following recent upgrades to equipment has remained unprofitable for a number of years.⁴⁹

6.52 Mr Henry Segerius, the Director and General Manager of Operations, Grain Products Australia, identified a number of concerns with the carbon tax, all of which will threaten the business's ongoing viability including an inability to pass on higher costs because of intense competition; the direct cost impact that will result from the imposition of the tax without a consequential benefit to the business; and the fact that GPA's overseas competitors have no equivalent cost impost on their electricity expense. Mr Segerius explained that the cost of natural gas to GPA's main competitor is just one-third of the cost that they pay in Tamworth.⁵⁰ In addition, Mr Segerius

47 Senator Doug Cameron, Senate Select Committee on the Scrutiny of New Taxes and Mr Michael Broekman, Owner, Namoi Valley Bricks, *Committee Hansard*, 3 August 2011, p. 42.

48 Mr Henry Segerius, Director and General Manager, Grain Products Australia, *Committee Hansard*, 3 August 2011, p. 47.

49 Mr Henry Segerius, Grain Products Australia, *Committee Hansard*, 3 August 2011, p. 47.

50 Mr Henry Segerius, Grain Products Australia, *Committee Hansard*, 3 August 2011, p. 47.

voiced concern that the costs of reporting and compliance following introduction of a carbon tax will be high and detract from running a business:

... it is clear that the tax and its administration will impose added costs which will reduce our competitiveness and threaten the viability of the business. At the same time the tax will not provide any more incentive to reduce our emissions than is already the case through high and increasing electricity and coal costs.⁵¹

6.53 It is GPA's concern that Australia is going to pay a very high price to try and influence the rest of the world to take action against carbon emissions.⁵² Mr Segerius went on to say:

Senator MADIGAN: We have heard today about the so-called level playing field and the free market. Under what is proposed by the government your company—an Australian company—will pay the carbon dioxide tax and your competitors exporting to Australia will not.

Mr Segerius: Correct.

Senator MADIGAN: Would it be fair to say that that will put you at an even further disadvantage under a so-called level playing field?

Mr Segerius: Yes.

Senator MADIGAN: How much bang for your buck do you think your company is going to get from this proposed tax in reducing emissions?

Mr Segerius: None.⁵³

Regional Queensland

6.54 Queensland's population is more geographically dispersed than any other mainland state; just 45.7 per cent of the Queensland population live within the capital city compared to an average of 63.8 per cent in the other Australian states.⁵⁴ The economy of the state owes its relative strength to the industries of mining, agriculture and tourism.

Mackay – evidence of the impact of the carbon tax

6.55 The committee held a public hearing in Mackay. At that hearing the committee heard from a number of industry groups – the Chamber of Commerce and Industry Queensland, the Mackay Whitsunday Regional Development Corporation,

51 Mr Henry Segerius, Director and General Manager, Grain Products Australia, *Committee Hansard*, 3 August 2011, p. 48.

52 Mr Henry Segerius, Grain Products Australia, *Committee Hansard*, 3 August 2011, p. 50.

53 Senator John Madigan and Mr Henry Segerius, Grain Products Australia, *Committee Hansard*, 3 August 2011, p. 54.

54 <http://www.oesr.qld.gov.au/products/tables/historical-tables-demography/index.php> (accessed 9 September 2011).

the Mackay Area Industry Network, and Tourism Whitsundays as well as the following businesses:

- Mackay Canegrowers;
- Queensland Nickel;
- Mackay Sugar; and
- CQ Rescue.

Local business groups

6.56 The Mackay region's economy is largely driven by mining, farming and tourism.⁵⁵ These industries all stand to be negatively affected by the added impost of a carbon tax. Witnesses from the Mackay region identified that the existing additional challenges faced in regional areas would be compounded under a carbon tax.

6.57 According to the Mackay Policy Council of the Queensland Chamber of Commerce and Industry:

... in regional areas, the cost of transport is more significant than it is in metropolitan areas. Most consumables and business inputs have a big transport component in them. Regional businesses and consumers will be disadvantaged compared to their counterparts in the capitals by any increase in transport costs.

...

There is a bigger transport component in our regional way of life because most goods are produced or circled through the capitals. Food, building materials, medical supplies and inputs for just about everything have a bigger transport component when you are in the regions than they do in the metropolitan areas. For that reason, the regions will be more impacted by the carbon tax.⁵⁶

6.58 Speaking on behalf of their 300 members, Mr Peter Grant, Chair of the Regional Policy Council of the Chamber of Commerce and Industry Queensland, voiced the concerns of local businesses:

As residents of a regional area and as representatives of business in a regional area, we are greatly concerned about anything that disadvantages our businesses and communities in regional areas compared to the metropolitan areas. We are very strong advocates for decentralisation. Queensland already is quite decentralised, but there are always pressures to centralise. People who live in the regions do so for many and varied reasons. Even from an environmental point of view there are certain

55 Mr Peter Grant, Chair, Regional Policy Council, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 1.

56 Mr Peter Grant, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 1.

advantages in having a decentralised country and not being concentrated in large metropolitan areas.⁵⁷

6.59 Mr Grant explained that business confidence in the region, which has remained weak since the global financial crisis, has fallen further in the three months since the announcement of the carbon tax.⁵⁸ Mr Grant identified that the concern of businesses is that the carbon tax will stifle growth, which will in turn damage their viability in the region:

Business confidence has been poor since the GFC. Alarming, it has fallen further in the last three months as highlighted by a recent Pulse Survey we did of business conditions in Queensland. Even in Mackay, which should be the epicentre of the resources boom, business conditions are less than buoyant in most sectors and have fallen in the last three months. Business confidence is essential for employment and investment in business. The proposed carbon tax along with other factors is something [sic] the confidence of business owners. Businesses are concerned that the carbon tax will put the brakes on mine development and the flow-on effect will be felt by all those almost supporting businesses in this region.⁵⁹

6.60 Mr Grant also raised concerns with the government's proposed compensation package:

Businesses are also concerned that the tax seems to be a business tax. Households will be compensated with businesses left to pay. Many are just hanging on with profitability and capital investment levels already poor and they fear that the added cost will push some of them over the edge.⁶⁰

6.61 Mr Grant did explain to the committee that household compensation is necessary, however, to ensure that demand and consumer spending is not further suppressed. The concern of businesses is that the proposed tax and compensation package will be inefficient:

I am not going to argue against compensating households because that will suppress demand even further. We are in a situation already where household demand is at very low levels. We can see that retailers are struggling to entice customers into their stores. Retailing is a very large employer so we certainly would not want to see household demand stifled any further. If you take the position that you have to have a carbon tax, I am not going to argue against household compensation. However, one of the

57 Mr Peter Grant, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 2.

58 Mr Peter Grant, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 1.

59 Mr Peter Grant, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 1.

60 Mr Peter Grant, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 2.

things that concerns business is that too much of the tax take will not be tied up in administering whatever scheme is brought in. It will be very counterproductive for our economy if we collect \$10 and give \$5 to households and \$3 to renewable projects, and spend \$2 administering the whole shebang because we have already reduced our efficiency by 20 per cent.⁶¹

6.62 He explained that the inability of businesses to pass on any increased costs that result from the carbon tax may lead to the failure of some businesses:

In some cases, passing on costs will be imperative because the businesses are running very, very close to the wind already. If they are unable to pass the costs on, it could mean the failure of those businesses. If they do pass the costs on, then the consumers of those services and businesses will be paying more. Businesses will fall into various categories. In this area we have some smallish businesses that do export, and generally they will not be able to pass on any of those costs, so those costs will have to be absorbed by their customers.⁶²

6.63 Like the Chamber of Commerce and Industry, representatives from the Mackay Whitsunday Regional Development Corporation and the Mackay Area Industry Network, identified that the lack of information about how the tax will work is creating uncertainty, thereby damaging business confidence and driving investment and jobs offshore:⁶³

We have already seen examples of the effect on the market of rising business costs. Industries under threat include the cement industry and we saw the recent closure of Cement Australia's facility at Kandos. This is a good example of potential supply threats to our domestic market. As the number of suppliers declines input costs will rise because competition will decrease or it will go offshore.⁶⁴

6.64 These witnesses also voiced strong concerns in relation to: the cost of living, including housing affordability; exports, as a result of the dollar's high value; tourism which is also suffering; and the unknown costs of administering the tax.⁶⁵

61 Mr Peter Grant, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 9.

62 Mr Peter Grant, Chamber of Commerce and Industry Queensland, *Committee Hansard*, 5 August 2011, p. 2.

63 Ms Narelle Pearse, Chief Executive Officer and Managing Director, Mackay Whitsunday Regional Development Corporation, *Committee Hansard*, 5 August 2011, p. 10.

64 Ms Narelle Pearse, Mackay Whitsunday Regional Development Corporation, *Committee Hansard*, 5 August 2011, p. 11.

65 Ms Narelle Pearse, Mackay Whitsunday Regional Development Corporation, *Committee Hansard*, 5 August 2011, p. 11.

Mackay Canegrowers

6.65 Mackay Canegrowers provides representation, advice and services to growers in the Central Queensland region on a wide range of issues including advocacy, marketing, water, workplace health and safety, transport, environment, training and business management.⁶⁶ Approximately 4,000 farmers within the Queensland sugar industry produce approximately 30 million tonnes of sugar cane annually. This cane is then processed into four million tonnes of sugar; one million tonnes for consumption in Australia and New Zealand, and the remainder exported.⁶⁷

6.66 Mackay Canegrowers explained to the committee that despite the exclusion of agriculture's direct emissions from the carbon tax, as their key inputs will be affected, their main concern with the tax is the potential it has to lessen the industry's international competitiveness:⁶⁸

Our principal complaint about a carbon tax is that it lessens our international competitiveness. We are a trade-exposed industry; over 80 per cent of our production is exported. When you hear about the world's sugar-producing countries, what comes to your mind is Brazil, India and Thailand. You have all heard about them being major sugar-producing countries, but they all have a significant domestic market. I am saying that, of all the major sugar-producing countries, we are the most trade exposed by a country mile. Even our domestic sales—that is, what we sell into Australia and New Zealand—have their price discovery anchored to the world price. The world price is the economic engine of our industry. Over 80 per cent of world sugar production never crosses international borders. The international commodity of sugar has been characterised for decades by high levels of government support and market interventions. Certainly the resultant world price that we access as producers in Australia is not necessarily a reflection of the costs of efficient producers within Australia. Hence, it is impossible for Australian cane producers to pass on our costs to any other consumers or any other economic sector. I guess at the end of the day we are the end of the rail line. There is no one else that we can pass our costs on to.

It is our view that a carbon tax simply falls on to our cost bottom line. It makes us less competitive and less profitable. We do not believe our principal competitors, of whom I have articulated a few—Thailand, Brazil, South Africa, Guatemala and India—are exposed, at this juncture, to any trading scheme or any carbon tax. So given that circumstance we believe that a carbon tax will make Australian cane farmers less competitive, whilst conferring a competitive advantage to our competitors.⁶⁹

66 <http://www.mackaycanegrowers.com.au/> (accessed 19 August 2011).

67 Mr Paul Schembri, Chairman of the Board, Mackay Canegrowers Ltd, *Committee Hansard*, 5 August 2011, p. 19.

68 Mr Paul Schembri, Mackay Canegrowers Ltd, *Committee Hansard*, 5 August 2011, p. 19.

69 Mr Paul Schembri, Mackay Canegrowers Ltd, *Committee Hansard*, 5 August 2011, pp 19–20.

Tourism Whitsundays

6.67 Tourism Whitsundays voiced concern that the government's proposed carbon tax package will damage their industry through increased operating costs. Tourism Whitsundays represents the tourism industry in the Whitsundays; it is a part of the Great Barrier Reef tourism industry. The industry employs approximately 63,000 people along Queensland's east coast, making it the state's largest employer, and generates \$5.8 billion in revenue.⁷⁰ Tourism Whitsundays estimates that the tourism industry provides direct employment for 3,400 people in their shire.⁷¹

6.68 Tourism Whitsundays' concern over increased operating costs is the result of their reliance on barges and ferries and the impact that the wind-back in the diesel fuel rebate will have for them.⁷² As a result of this change to the diesel fuel rebate, one ferry company alone will face increased fuel costs of \$124,000 in the first year, \$255,000 in the second year and \$392,000 in the third year, assuming no increase in diesel use.⁷³ These increased costs will be felt independent of any other costs or factors that impact their business:

Mr O'Reilly: We are an unusual sector of the industry in that we are so reliant on marine and aviation tourism. Whilst it is going to have a drastic impact on tourism across Australia and make us more expensive—we have already become one of the most expensive destinations in the world—I can see nowhere where that impact is going to be more severe than on us. In [the carbon tax's] current form, I would not like you to pass it.

CHAIR: In the current form, you would not like us to pass it. We are all in favour of doing the right thing by the environment. The question is whether what is being done is actually going to make a difference. That is the concern we have. Will most of your cost increases come when the carbon tax hits fuel? What is driving the biggest cost impacts of the carbon tax?

Mr O'Reilly: The one that will be incredibly immediate in the marine tourism area is the marine fuel rebate. That is going to have 6.21c taken off it next year—2012-13—and then in the following year there will be an additional 6.521c off, and in the following year 6.85c. In total, 19.59c per litre will go onto their costs. These people are using about two million litres of diesel a year so at the end of that third year it is \$771,000.⁷⁴

70 Mr Peter O'Reilly, Chief Executive Officer, Tourism Whitsundays, *Committee Hansard*, 5 August 2011, p. 27.

71 Mr Peter O'Reilly, Tourism Whitsundays, *Committee Hansard*, 5 August 2011, p. 27.

72 Mr Peter O'Reilly, Tourism Whitsundays, *Committee Hansard*, 5 August 2011, p. 27.

73 Mr Peter O'Reilly, Tourism Whitsundays, *Committee Hansard*, 5 August 2011, p. 27.

74 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mr Peter O'Reilly, Chief Executive Officer, Tourism Whitsundays, *Committee Hansard*, 5 August 2011, pp 28 – 29.

6.69 Tourism Whitsundays voiced concern that their industry is not being treated with the same level of importance as those of mining and agriculture:

I had the pleasure of chatting with the Minister for Regional Australia, Regional Development and Local Government, Mr Crean, last week and it seemed that the impact had not been considered at all.

...

The impact of climate change could be quite significant. I think the immediate impact of the proposed taxation regime will be far more swift and far more devastating.

...

I am suggesting that there will not be anybody there to be inundated if we apply this tax and this town dries up and blows away. I want to make sure that we are treated equitably. I am not suggesting that we should not be taking steps for climate change. I question whether this is the correct step. Most importantly, when you are applying new taxes like this, we really demand to see tourism treated with the same respect as mining, agriculture, forestry and all of those other industries that seem to have got a pat on the head when we have been ignored.⁷⁵

6.70 Tourism Whitsundays informed the committee that the increased operating costs that result from the imposition of a carbon tax will have a negative effect on the international competitiveness of Queensland's tourism industry; as costs increase tourists will be driven to overseas destinations.⁷⁶

Mackay Sugar Ltd

6.71 Mackay Sugar gave evidence to the committee that their preliminary assessment of the carbon tax has identified that, in the long run, the introduction of a carbon tax will provide some opportunities, whilst in the short term, there will be some costs that cannot be passed onto customers given that a large proportion of their product is exported.⁷⁷ Mackay Sugar, a public unlisted company, is a raw sugar producer. The business employs over 800 people during the crushing season and 550 people in the non-crushing season. It supplies approximately 20 per cent of Australia's raw sugar.⁷⁸

6.72 Mackay Sugar has been identified by government as one of the top 500 emitters; however the company has informed the committee that they are unlikely to qualify for assistance as an emissions-intensive trade-exposed industry and that as an

75 Mr Peter O'Reilly, Tourism Whitsundays, *Committee Hansard*, 5 August 2011, pp 28 – 29.

76 Mr Peter O'Reilly, Tourism Whitsundays, *Committee Hansard*, 5 August 2011, p. 31.

77 Mr John Hodgson, Business Development Manager, Mackay Sugar Ltd, *Committee Hansard*, 5 August 2011, p. 45.

78 Mr John Hodgson, Business Development Manager, Mackay Sugar Ltd, *Committee Hansard*, 5 August 2011, p. 45.

alternative they will be looking to determine their eligibility for assistance as a food processor.⁷⁹ The witnesses also explained their business's involvement in renewable energy:

As a large sugar manufacturer, Mackay Sugar generates considerable quantities of renewable energy using by-products of the annual cane crop. The 20 petajoules of renewable energy produced and consumed each year in our three factories is equivalent to the energy contained in about 700,000 tonnes of coal. If Mackay Sugar derived its energy from fossil based fuels, like most businesses do, we would generate an extra 1.7 million tonnes of CO₂ each year. We receive no recognition for this effective carbon abatement. However, under the proposed carbon tax Mackay Sugar will be largely exempt from direct greenhouse gas emission liabilities. Also, a carbon price will drive our business to improve overall energy efficiencies and reduce the use of supplementary coal fuel at our factories.⁸⁰

6.73 Although Mackay Sugar will be largely exempt from a carbon tax, their liability will be \$1.5 million per annum:

CHAIR: And you said you were not getting any emissions-intensive trade-exposed assistance.

Mr Hodgson: No, we do not.

CHAIR: Why is that?

Mr Hodgson: The definition for that is emissions per million dollars of export product.

CHAIR: It is because your emissions are too low.

Mr Hodgson: Yes.

CHAIR: You are in the top 500, so you get captured by the carbon tax.

Mr Hodgson: We do... It is a little complex on our site. The refinery is owned by a joint venture, CSR and us, or Sucrogen as they are now. We have a liability because we emit the carbon emissions from burning coal in the off-season to supply steam and electricity to the joint venture.

CHAIR: So you are in the top 500 emitters. Are you trade exposed?

Mr Hodgson: Yes. Our raw sugar is effectively 100 per cent trade exposed, even though only 80 per cent is exported. But even what we sell domestically is sold at world export prices.

CHAIR: So that \$1.3 million is a net cost, then?

Mr Hodgson: It is.

CHAIR: What does that represent as part of your margin?

79 Mr John Hodgson, Mackay Sugar Ltd, *Committee Hansard*, 5 August 2011, p. 45.

80 Mr John Hodgson, Mackay Sugar Ltd, *Committee Hansard*, 5 August 2011, p. 45.

Mr Hodgson: As part of our margin it is quite significant. As far as our total revenue goes it is about 0.3 per cent of our total annual revenue.⁸¹

Queensland Nickel

6.74 Queensland Nickel raised concerns that the implementation of the proposed carbon tax as it now stands will place them at a significant trade disadvantage to their overseas competitors.⁸² Queensland Nickel is a 100 per cent value-add manufacturing/processing plant with a turnover of \$1.1 billion per year.⁸³ Queensland Nickel is one of the top 500 emitters – it is number 48 on the government's list.⁸⁴ Its operations, located in Townsville, provide a large amount of private employment in North Queensland, as well as significant regional benefits through payments to government, Queensland Rail, Townsville port operation and a number of local businesses and community sponsorships:⁸⁵

An independent assessment of direct industrial and consumption effects, commissioned by the Townsville Enterprise group and conducted in January 2009, estimated the impact of closure of Queensland Nickel and the loss of then 750 direct jobs would result in approximately 2,396 jobs lost within the Townsville community. Since the purchase of the plant by Mr Palmer we have increased our workforce from 550 when he took over to 900 direct employees now and a further 200 contractors, resulting in a direct positive impact and no doubt a bigger financial impact if we were to change at the moment.⁸⁶

6.75 Queensland Nickel's concern is that the clean energy bills, as they stand, will force them into a loss situation with serious impacts on their operations and the region while at the same time providing an advantage to their high emitting overseas competitors:⁸⁷

The policy intent is to direct assistance to Australian businesses and Queensland Nickel is the only Australian owned nickel producer. The other two are multinational companies. A single definition for nickel would grossly under compensate Queensland nickel and deliver a windfall gain to at least one of the multinationals because they would average all the emissions across them, divide them by 3 and lift one out of an area where they are not compensated.

81 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mr John Hodgson, Mackay Sugar Ltd, *Committee Hansard*, 5 August 2011, p. 46.

82 Mr Trefor Flood, General Manager, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

83 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

84 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 37.

85 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

86 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 35.

87 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 36.

...

Overall Queensland Nickel has significant concerns about the clean energy future bill. The government is embarking on a massive development program and obviously manufacturing will pay for it. Regional areas, due to increased distribution costs, will be hardest hit, and we are in a regional area. Queensland Nickel's significant contribution to regional development, investment and employment is put at risk by the proposed bill, increasing the impact in the Townsville region.

...

In short, because there is no current reduction opportunity that would enable Queensland Nickel to utilise, say, the three-for-one offer that is currently out there in the proposed clean technology program, and in the absence of a fair and equitable definition for nickel, the impact of the carbon price on the business will be serious in the short term and could be catastrophic in the long term.⁸⁸

6.76 The witness explained that the fact that the carbon tax would result in an unlevel playing field would lead to these potentially negative outcomes.

Coal

6.77 The coal industry is the backbone of many regional towns across Australia resulting in direct and indirect employment and substantially contributing to the economic viability of the towns in the areas they have operations.

6.78 The Australian Coal Association (ACA) in its public submission to the Joint Select Committee on Australian Clean Energy Future Legislation stated that the Government's scheme represents an \$18 billion tax take from their industry in the first 10 years.⁸⁹

6.79 In addition, the ACA has stated that the tax undermines Australia's international competitiveness. The Government fails to accept that Australia competes on a world scale for investment in the resources sector competing against such regions as Africa and South America which have a lower tax impost compared to Australia.

6.80 The ACA has said that the impacts of the proposed scheme includes:

- a permanent reduction in margins across the commodity cycle risking premature mine closures and job losses in regional areas;

88 Mr Trefor Flood, Queensland Nickel Pty Ltd, *Committee Hansard*, 5 August 2011, p. 36.

89 Australian Coal Association, *Submission to the Joint Select Committee on Australian Clean Energy Future Legislation*, p.2

- a competitive disadvantage relative to producers in Indonesia, Columbia, USA, Canada, Russia and South Africa and emerging competitors such as Mozambique and Mongolia;
- reduced new project investment certainty; and
- uncertainty about committing sustaining investment at existing operations; and
- impacts on project valuation and business decisions forcing companies to re-order the ranking of Australian projects in their investment pipelines.⁹⁰

6.81 The ACA has also stated that ACIL Tasman's preliminary advice also suggests new mining development job opportunities will be reduced by 27%. This reduction also represents over \$25 billion in lost revenue for Australia over the next ten years.⁹¹

Regional Victoria

6.82 Victoria has a population of around 5 million people, 70 per cent of whom live within the capital city, Melbourne.⁹² Victoria's regional centres are all within a relatively short distance from the state's capital.⁹³ The regional areas of Victoria are characterised by a variety of different economic opportunities including: agriculture (dairy, beef, sheep and wool, pigs, poultry, fruit and vegetables, viticulture); commercial fishing; food processing; tourism; automotive manufacturing; aluminium smelting; tourism; timber processing and paper product manufacturing.⁹⁴

6.83 Victorian Government modelling, conducted by Deloitte Access Economics,⁹⁵ shows that the regions experiencing the greatest negative impacts are those specialising in electricity generation or mining, oil and gas, and commercial services. The La Trobe LGA experiences the strongest negative impact on output and employment as a result of the national carbon price. This is largely due to the region's dependency on electricity generation. By 2020, output in Latrobe is set to decline by

90 Australian Coal Association, *Submission to the Joint Select Committee on Australian Clean Energy Future Legislation*.

91 Australian Coal Association, *Submission to the Joint Select Committee on Australian Clean Energy Future Legislation*, p.3

92 <http://www.liveinvictoria.vic.gov.au/living-in-victoria/melbourne-and-regional-victoria> (accessed 12 September 2011).

93 <http://www.liveinvictoria.vic.gov.au/living-in-victoria/melbourne-and-regional-victoria> (accessed 12 September 2011).

94 <http://www.liveinvictoria.vic.gov.au/living-in-victoria/melbourne-and-regional-victoria> (accessed 12 September 2011).

95 Deloitte Access Economics, *Modelling the Clean Energy Future Policy*, 2011

3% and there will be an estimated drop in employment of 552 jobs relative to the reference case.

Geelong

6.84 The committee held a public hearing in Geelong to hear the views of some of these regional stakeholders.

6.85 Mr David Chaston, Managing Director of Geelong Galvanizing, and the current Vice Chairman of the Galvanizers Association of Australia, appeared before the committee. He told the committee that the industry employs over 3,000, a large proportion of which is classified as unskilled workers. In appearing before the committee, Mr Chaston voiced the concerns of the industry explaining that the introduction of a carbon tax will threaten the industry's international competitiveness:

It goes without saying that the GAA and the industry it represents is most concerned about the implications of a carbon tax on its business, especially if such a cost burden makes it less able to compete again pre-galvanised steel imports that are not exposed to the same carbon tax costs.⁹⁶

6.86 Mr Chaston explained that further damaging the industry's international competitiveness through the introduction of a carbon tax will have dire consequences for the Australian industry, which is becoming increasingly trade exposed:

Such an outcome would obviously no doubt be wealth destroying to the business owners and cause massive job losses throughout the industry.⁹⁷

6.87 Mr Chaston advised the committee that his business has estimated that the introduction of a carbon tax will have an impact of 5 per cent across all of their costs, the issue being that that increase will not be felt by their international competitors.⁹⁸

6.88 The Geelong Chamber of Commerce, one of Australia's oldest continuing chambers with over 550 members,⁹⁹ who also appeared before the committee, raised similar concerns to Geelong Galvanizing:

If it is a negative shared by our competitors globally, then we can live with that, but, when we see an impost applied locally and not being applied to our competitors, that disadvantages us and we are opposed to it. I think we would acknowledge that the carbon tax, relative to the high Australian dollar and relative to many other increases in prices, is just one more

96 Mr David Chaston, General Manager, Geelong Galvanizing, *Committee Hansard*, 1 September 2011, p. 10.

97 Mr David Chaston, Geelong Galvanizing, *Committee Hansard*, 1 September 2011, p. 10. Note: Nationally, the galvanizing industry employs a workforce of over 3,000 people, a large proportion of which are unskilled.

98 Mr David Chaston, Geelong Galvanizing, *Committee Hansard*, 1 September 2011, p. 16.

99 Mr James Walsh, President, Geelong Chamber of Commerce, *Committee Hansard*, 1 September 2011, p. 31.

element. It is not decisive in itself, but it is an impost in the wrong direction.¹⁰⁰

6.89 The Chamber identified that the many jobs provided to locals by the Geelong region's manufacturing base could be put at risk by the introduction of a carbon tax and outlined that they favour more of a 'carrot and less of a stick' in encouraging emissions reduction:

The high Australian dollar is having a significantly detrimental effect on Australian manufacturers; the carbon tax is likely to exacerbate this situation. A plan that is likely to result in manufacturing jobs simply moving offshore to countries such as China, which does not have a carbon tax, makes no sense.¹⁰¹

Over the years, as you know, there have been a lot of downturns in the manufacturing sector and Geelong has been pretty hard hit over the years. A lot of the traditional workforce—we are talking about second and third generation families—of manufacturing positions have really had their positions pretty much decimated. It has led to some fairly high unemployment in certain sectors of the community... for this sector to be hit even further is going to impact most definitely on this vulnerable sector...¹⁰²

Committee comment

6.90 The committee considers that the evidence clearly reflects that the introduction of a carbon tax will have a disproportionate negative impact on regional Australia. Furthermore, the government has not accurately or adequately modelled the possible affects citing difficulties with modelling at a sub-state level.

6.91 The committee considers that neglecting to model the impact of such a major policy change as the introduction of a carbon tax on regional Australia is irresponsible and offensive and flies in the face of established practices by state governments.

6.92 Throughout its inquiry the committee heard the concerns of regional Australia and considers that, to date, these stakeholders, who play an important role in Australia's economy, have been overlooked. Foremost in the minds of these businesses is the concern that the impost of yet another tax will cause further erosion of their already slim profit margins, thereby putting their long term financial viability, and the jobs and livelihoods of families in regional Australia, in jeopardy.

100 Mr James Walsh, Geelong Chamber of Commerce, *Committee Hansard*, 1 September 2011, p. 31.

101 Mr James Walsh, Geelong Chamber of Commerce, *Committee Hansard*, 1 September 2011, p. 31.

102 Ms Bernadette Uzelac, Executive Officer, Geelong Chamber of Commerce, *Committee Hansard*, 1 September 2011, p. 36.

Chapter 7

Picking up the cost – the carbon tax on households

7.1 Chapter 7 provides an assessment of the impact that the carbon tax will have on the cost living.

7.2 As detailed in Chapter 3, the government is proposing the introduction of a fixed price carbon tax from 1 July 2012 before transitioning the economy to an emissions trading scheme.

7.3 The government has already announced that the carbon tax will result in increased costs for households and the government budget including:

- (a) a 10 per cent increase in electricity bills in the first year;
- (b) a 9 per cent increase in gas bills in the first year;
- (c) for the first time since the 1980s will see higher marginal tax rates for low and middle income earners; and
- (d) a hit to the Budget bottom line of at least \$4.3 billion in the first few years alone.

7.4 Evidence provided to this committee suggests that the proposed carbon tax will have a damaging effect on the community. The committee is of the view that carbon tax will not lead to reductions in global emissions but will:

- lead to job losses;
- negatively impact the competitiveness of many Australian industries; and
- cause uncertainty for investment.

7.5 The committee believes that such outcomes will make circumstances difficult for consumers.

The impact of a carbon price on households

7.6 Under the government's design, announced on 10 July 2011, the proposed carbon tax will be directly paid by 500 companies¹ through a requirement to purchase a permit for every tonne of carbon dioxide (CO₂) emissions they produce.² Indirectly,

1 This figure of 500 companies does not include those that will pay an effective carbon tax through the proposed changes to the fuel tax credit scheme. The businesses and consumers impacted by those changes are covered in more detail in Chapter 10.

2 Australian Government, *Supporting Australian Households – Helping households move to a clean energy future*, p. 4.

the carbon tax will be paid by all Australians as the tax will change the price households pay for goods and services.

7.7 Professor John Freebairn, an economist who appeared before the committee, takes the view that the cost of acting on climate change, through the introduction of a price on carbon, will be passed on to consumers:

Although the statutory or initial incidence of a higher price on carbon, either a tax or the market price of tradable permits, falls on the about 1000 firms producing petroleum products and electricity, once the economy adjusts most of the new indirect taxes and explicit charges for pollution are passed on to households as higher prices.³

7.8 On 10 July 2011, on announcing the details of the tax, the government claimed that modelling had identified the expected impact on the consumer price index (CPI)⁴ would be 0.7 per cent:

Some businesses will pass on the carbon price, leading to modest rises in prices. In 2012-13, this is expected to increase the cost of living by 0.7 per cent ... Many prices, particularly food, will hardly be affected. On average food will go up by less than \$1 per week for households.⁵

7.9 The government has since released updated modelling of the impact of the carbon tax on households. This updated modelling, released on 21 September 2011, confirmed the earlier results which identified that the impact of a carbon tax of \$23 per tonne on aggregate consumer prices would be 0.7 per cent in 2012-13.⁶ In the updated modelling, the government did, however, identify that the transition to a

3 Professor John Freebairn, *Submission 2*, p. 5.

4 The Consumer Price Index (CPI) is 'a measure of changes, over time, in retail prices of a constant basket of goods and services representative of consumption expenditure by resident households in Australian metropolitan areas. ... As prices vary, the total price of this basket will also vary. The CPI is simply a measure of the changes in the price of this basket as the prices of items in it change. The CPI measures price changes relating to the spending pattern of metropolitan private households. ... For practical reasons, the CPI basket cannot include every item bought by households, but it does include all the important kinds of items. ... The total basket is divided into a number of major commodity groups, subgroups and expenditure classes. It covers items such as food, alcohol and tobacco, clothing and footwear, housing, household contents and services, health, transportation, communication, recreation, education and financial and insurance services'. Source: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DSSbyCollectionid/1E564CACF4CBEC32CA256ED8007EF06E?opendocument> (accessed 13 July 2011).

5 Australian Government, *Supporting Australian Households – Helping households move to a clean energy future*, p. 4.

6 Australian Government, *Strong Growth, Low Pollution, Modelling a Carbon Price – Update*, 21 September 2011, p. 2.

floating carbon price in 2015-16 would result in a second increase in aggregate consumer prices by a further 0.2 per cent.⁷

7.10 Although the impact on households is considered to be critical, some participants in the policy debate take the view that to be effective, a price on carbon must be high enough to result in a change in behaviour.⁸

7.11 The next section of the report highlights the impact on households: utility bills, groceries, houses and cars. However, before turning to those impacts, it is important to note a major difficulty with the government's estimates of the extent of price increases.

7.12 Contrary to what appears to be the widely held view, those estimates are *not* based on the Treasury modelling used to examine the impacts of the carbon tax on the economy. Rather, they are based on an entirely different model, the Price Revenue Incidence Simulation Model (*PRISMOD*). According to the committee, there is no reason to believe those estimates bear any relation to the estimates of the wider economic effects. Moreover, the *PRISMOD* estimates take no account of the fact that in Treasury's wider modelling, real wages are estimated to decline substantially so as to maintain full employment consistent with the Treasury assumption imposed on its models. No compensation is being provided for those real wage reductions, so even if the price impacts as estimated by *PRISMOD* are offset for particular consumer groups, those groups could still be significantly worse off.

7.13 This was not an issue in respect of the GST (where price estimates were also obtained using *PRISMOD*). The GST was expected to increase real wages in the long run, as it increased the efficiency of the tax system and, with it, Australia's economy. In contrast, the carbon tax will reduce real wages, all the more so if Australia's competitors do not impose a similar burden on their economies.

7.14 Consumers will therefore face a 'double whammy' - higher prices and lower incomes, without this being taken into consideration in the compensation they can obtain.

Electricity

7.15 On announcing the carbon tax, the government stated:

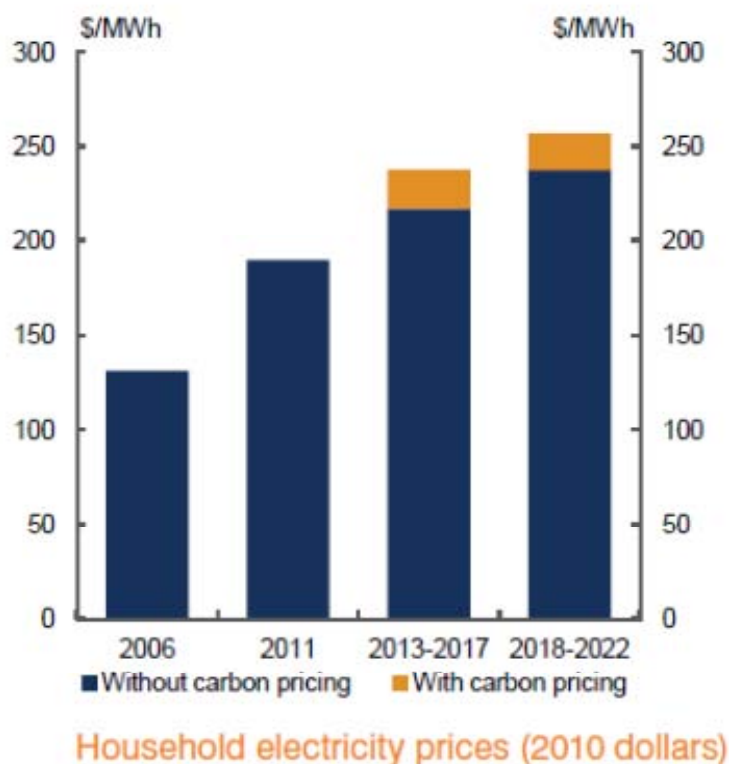
Electricity prices are expected to rise with or without carbon pricing. Carbon pricing is expected to add around 10 per cent to electricity prices in 2012-13 and 9 per cent to gas prices.⁹

7 Australian Government, *Strong Growth, Low Pollution, Modelling a Carbon Price – Update*, 21 September 2011, p. 2.

8 Construction Forestry Mining and Engineering Union, *Submission 9*; The Australia Institute, *Submission 16*; Professor Jack Pezzey, *Submission 18*.

7.16 The government's modelling, also released on 10 July 2011, indicated that the introduction of a carbon tax would lead to only a modest increase in electricity prices of \$3.30 per week.¹⁰ In its updated modelling, released on 21 September 2011, the government confirmed that the aggregate increase in consumer prices of 0.7 per cent included the 10 per cent increase in household electricity prices.

Graphic 7.1: Household electricity prices (\$ 2010)¹¹



7.17 Regardless of what the effect on the consumer price index (CPI) is, any price increases that result from the new tax will have a negative effect on the purchasing power of households:

Introducing a price on carbon not only raises the relative prices of carbon intensive products and processes to reduce pollution, it also raises the average cost of living.¹²

9 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, at <http://treasury.gov.au/carbonpricemodelling/content/overview/page8.asp> (accessed 3 October 2011).

10 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, p. 8.

11 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, p. 124.

12 Professor John Freebairn, *Submission 2*, p. 8.

7.18 There is no doubt that prices will increase for consumers. In fact, industries affected by the introduction of the proposed tax have informed the committee that they will need to pass on the costs of the tax. The Energy Retailers Association of Australia (ERAA)¹³ stated in their submission that:

If a regime of regulated retail tariffs remains across the board in Australia, energy retailers need full pass through of carbon costs through adjusted regulated tariffs allowing sufficient head room to account for the associated risks of uncertainty and wholesale market volatility. The retail component constitutes only a fraction of the final price of energy, with network costs and wholesale electricity costs together contributing approximately 90%. As such, energy retailers face significant risks if a carbon price is implemented without adequate pass through provisions, this risk is further exacerbated due to the added wholesale volatility and uncertainty. It is therefore imperative to maintain retail competition and reduce the risk of retailer default that regulated retail tariffs are set with full pass through of the costs of carbon and the associated added volatility from introducing a carbon price.¹⁴

7.19 The Australian Gas Light Company (AGL) suggests that the price of electricity will rise under a carbon tax but that any price increase will be higher in an environment of policy uncertainty:

Our analysis indicates that the increase in electricity prices at the residential level is likely to be between 3% and 6% depending upon the demand growth scenario used. These price increases are primarily a “deadweight loss” to the economy associated with the introduction of a sub-optimal capital stock designed to minimise capital costs in an environment of carbon policy uncertainty. It is critical that policy makers note this dilemma and move quickly towards establishing a carbon policy framework that is accepted by all sides of politics. If this does not occur, these price increases are likely to be experienced irrespective of whether a broad based climate change policy is introduced or not.¹⁵

7.20 However, it needs to be noted that any certainty the carbon tax provides to the electricity industry is simply a risk transfer on to the economy and consumers as a whole. There is, in other words, real uncertainty about the future prospects for global abatement and; the Australian Government cannot eliminate that uncertainty. As a result, any certainty it provides to one industry about future carbon prices is just a

13 The ERAA represents those energy retailers who 'collectively provide electricity to over 98% of customers within the National Electricity Market (NEM) and are the first point of contact for end-use energy users'. Source: *Submission 7*, p. 1.

14 Quotation is from Tim Nelson, Head of Economic Policy & Sustainability, AGL Energy Ltd; Simon Kelley, Manager of Energy Policy and Regulation, AGL Energy Ltd; Fiona Orton, Carbon Project Analyst, AGL Energy Ltd; Paul Simshauser, Chief Economist and Group Head of Corporate Affairs, AGL Energy Ltd 'Delayed carbon policy certainty and electricity prices in Australia', provided by Energy Retailers Association of Australia Ltd, *Submission 7*, pp 1 – 2.

15 AGL Energy Ltd, *Submission 19*, p. 15.

transfer of the uncertainty on to other industries and on to the community more widely.

7.21 In their submission to the committee, the New South Wales Treasury explained that their modelling has shown that the most visible impact on households of a carbon tax will be on electricity prices:

The most clearly visible impact of a carbon price is on retail electricity prices.

Energy costs represent approximately forty percent of a residential electricity bill.¹⁶

7.22 While the Commonwealth Government estimated that the carbon tax would raise retail electricity prices by 10 per cent, the NSW Government estimated that the impact would be higher in New South Wales:

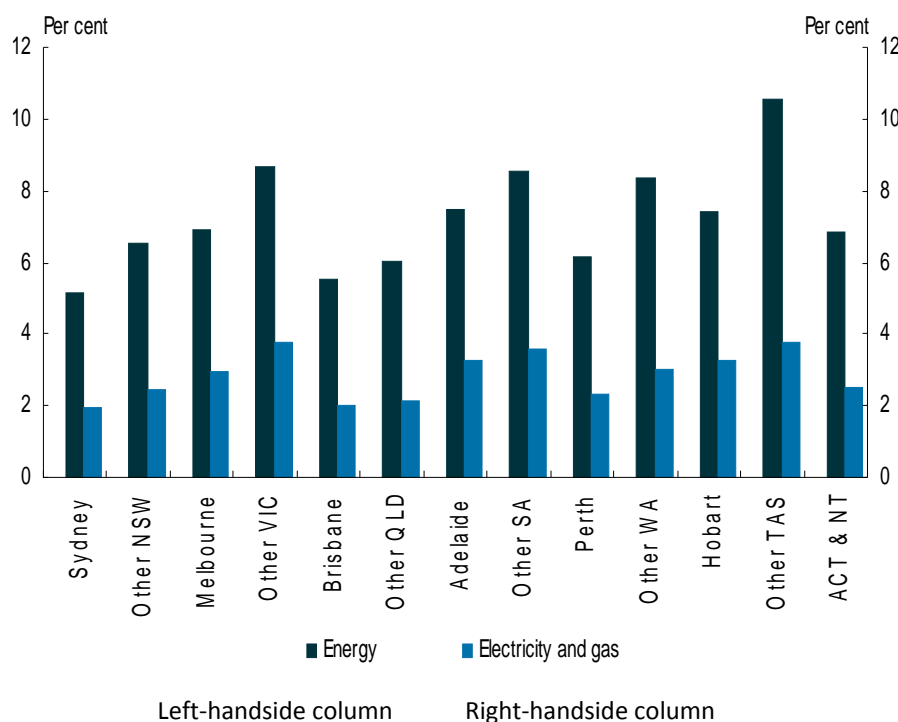
A 38% increase in wholesale electricity prices (Commonwealth estimate for the period 2013-2017 cited in its modelling report) would be expected to result in an increase of around 15% on final retail electricity prices, inclusive of network costs. Further detailed modelling and/or further analysis of the Commonwealth modelling reports (when they are released) would be required to confirm this impact.¹⁷

7.23 The NSW Government's finding is not necessarily inconsistent with the Treasury's analysis. The carbon tax may have different impacts on electricity prices in different States or locations. This indicates that while the government may be correct in arguing that households will be 20 cents per week better off *on average*, that will not necessarily be the case for any particular household, as prices and consumption will vary depending on location, household size and a house's energy efficiency characteristics.

7.24 Previous modelling by the Commonwealth Treasury, for the proposed Carbon Pollution Reduction Scheme, showed that electricity consumption in regional areas was higher than those in capital cities. For example, households in regional NSW spent 26 per cent more on electricity than those in Sydney, households in regional Victoria spent 25 per cent more on electricity than those in Melbourne, households in regional Queensland spent 10 per cent more on electricity than those in Brisbane, households in regional Western Australia spent 35 per cent more on electricity than those in Perth, households in regional South Australia spent 14 per cent more on electricity than those in Adelaide and households in regional Tasmania spent 43 per cent more on electricity than those in Hobart.

16 New South Wales Treasury, *Submission 81*, p. 10.

17 New South Wales Government, *Evaluation of the impacts of the Commonwealth's carbon price package*, 10 July 2011, p. 2
http://www.treasury.nsw.gov.au/_data/assets/pdf_file/0018/20466/Evaluation_of_Impacts_of_Comm_Carbon_price_Package_Aug11.pdf (accessed 3 October 2011).

Graphic 7.2: Spending on energy as a percentage of all spending 2010 - 11¹⁸

7.25 The Treasury has not published comparable figures in its modelling report for the carbon tax, however, if these disparities in spending on electricity between regional Australia and the capital cities were of the same order, it would mean that households in regional Australia would be worse off under the carbon tax on average. The government estimated that the price impact of the carbon tax on electricity, gas and water charges would be \$3.30 per week.¹⁹ Even taking the Queensland difference between capital city and regional spending (where the disparity is the lowest at 10 per cent), regional Queenslanders would be 33 cents per week worse off than persons in Brisbane under the carbon tax. This would mean that the average 20 cents a week better off that the government estimates, would not be enough to compensate a person living in regional Queensland, on average.

7.26 Regional Australians will also likely be hurt the worst from the eventual inclusion of transport fuel under the carbon tax regime. The cost of groceries and other essentials will generally have a greater proportion of transport costs embodied in their price in many regional areas. For regional Australians, the greater the distance, the greater the cost.

18 Department of the Treasury, *Australia's Low Pollution Future*, 2008, Chart 3.42.

19 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, <http://treasury.gov.au/carbonpricemodelling/content/overview/page8.asp>, (accessed 3 October 2011).

Committee comment

7.27 Australian households are already struggling with constantly increasing cost of living pressures. They should not be asked to absorb further increases in costs for their daily household necessities just to pay for a carbon tax which will make no difference to the environment.

7.28 Whilst the committee acknowledges that Treasury modelling claims that a portion of households will be overcompensated, the Treasury has only allowed for a 20 cent overcompensation buffer. This 20 cent buffer will disappear very quickly once businesses start to pass on the cost of the carbon tax down the supply chain – with households ultimately wearing the full financial cost of the carbon tax. What seems certain is that households will be out of pocket under the carbon tax.

Slugging first home buyers

7.29 In addition to rising electricity prices, building material manufacturers have cited that they will be forced to raise the cost of building materials as a result of the introduction of the proposed carbon tax.

7.30 Brickworks and CSR have warned of:

... serious cost pressures across the building sector after the government elected not to offer free carbon permits to key building materials businesses under the proposed carbon tax.²⁰

7.31 As a result of the proposed \$23 per tonne carbon price, Brickworks have said that they will be forced to raise prices by 6 per cent.²¹ CSR has also confirmed that it would raise prices:

... across its non-trade exposed divisions, which includes its brick, roof tile and plasterboard manufacturing divisions.²²

7.32 The Master Builders Association expects that the increased cost of building materials will add at least an extra \$5,000 to the price of a new home.²³ This does not include the costs of insulation which are also expected to increase. As a trade exposed

20 Dan Hall, 'Brickworks, CSR warn of increases', *Australian Financial Review*, 12 July 2011, p. 13.

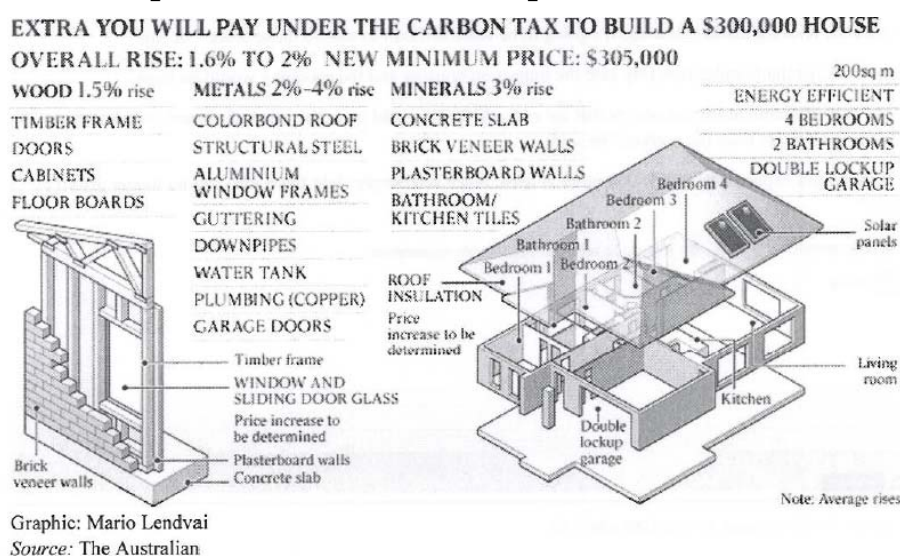
21 Dan Hall, 'Brickworks, CSR warn of increases', *Australian Financial Review*, 12 July 2011, p. 13.

22 Dan Hall, 'Brickworks, CSR warn of increases', *Australian Financial Review*, 12 July 2011, p. 13.

23 Sarah Danckert, 'Materials hike will add \$5000 to home price', *The Australian*, 12 July 2011, p. 7.

industry, insulation manufacturer CSR expects that increased costs will be harder to pass on to consumers and the tax will hit that part of their business hard.²⁴

Graphic 7.3: Impact of carbon tax on the price of a new house²⁵



7.33 Although it is difficult to measure the impact on the housing market, HomesAustralia suggests that:

The rule of thumb in the industry is that for every \$1000 you add on to the price of a home, you knock out 20 first-home buyers ... With homes expected to cost \$5000 more at least, that's 100 people right there who can no longer afford to buy.²⁶

7.34 Master Builders Australia (MBA) has also criticised the proposed tax, labelling it as a 'negative' for the building industry and a policy that will hurt homebuyers and small business without any upside for the construction industry.²⁷

7.35 In addition to those concerns, the MBA, in their submission to the committee, detailed that the industry, which currently accounts for more than 9 per cent of employment in Australia,²⁸ will be negatively affected at all levels by the introduction of a carbon tax. The MBA engaged the Centre for International Economics (CIE) to undertake a rigorous analysis of the impact of a carbon tax on their industry. The CIE has provided the MBA with the following preliminary findings:

24 Dan Hall, 'Brickworks, CSR warn of increases', *Australian Financial Review*, 12 July 2011, p. 13.

25 Sarah Danckert, 'Materials hike will add \$5000 to home price', *The Australian*, 12 July 2011, p. 7.

26 Sarah Danckert, 'Materials hike will add \$5000 to home price', *The Australian*, 12 July 2011, p. 7.

27 Wilhelm Harnisch, *Master Builders Australia News*, Home Buyers and Small Business – Carbon tax losers, Media Release, 10 July 2011.

28 Mater Builders Australia, *Submission 97*, p. 3.

costs: raising the absolute costs of materials (eg steel, cement, glass) and other inputs (eg energy and labour) used in building and construction;

production processes: changing the relative price shift in research and development practices and technical possibilities; and

demand: by slower-than-otherwise economic and income growth and potentially driving a change in consumer preference for different types of buildings.²⁹

7.36 Mr Wilhelm Harnisch, Chief Executive Officer of MBA, is concerned that the design of the tax will not achieve the government's policy objective:

The need to address climate change is recognised but the focus must not be on compensation but the policy fundamentals. ... The fundamental issue for the building and construction industry is the integrity of a carbon tax policy framework which has been driven more by the circumstances of a minority government rather than good public policy principles of efficiency, equity and simplicity.³⁰

7.37 The MBA take the view that the proposed carbon tax will have a cascading effect, adding costs at each point in the supply chain and therefore adding costs pressures to home buyers, small businesses and renters.³¹ They suggest that the government consider compensating first home buyers for the expected costs of a carbon price as a result of not only the carbon price but the concurrent requirement to build houses to a 'six star' energy rating.³² The MBA cited research which suggests that without compensation housing affordability in Australia will continue to worsen:

Economic research has estimated the national housing affordability ratio (the median house price divided by median income) at 7.3 in March 2011 (that is, the median house price was 7.3 times median income in that period), well ahead of the ratio of 4.7 recorded a decade earlier.

A housing affordability ratio below 5.0 is regarded by Natsem as "affordable" while a ratio between 6.0 and 7.0 is seen to be "not affordable" and a ratio above 7.0 is considered "severely unaffordable".³³

Grocery prices

7.38 According to Treasury, the government's modelled 0.7 per cent increase in the CPI is expected to translate into an 80 cent per week increase in food prices for

29 Master Builders Australia, *Submission 97*, p. 11.

30 Wilhelm Harnisch, *Master Builders Australia News*, Home Buyers and Small Business – Carbon tax losers, Media Release, 10 July 2011.

31 Wilhelm Harnisch, *Master Builders Australia News*, Home Buyers and Small Business – Carbon tax losers, 10 July 2011.

32 Master Builders Australia, *Submission 97*, p. 13.

33 Master Builders Australia, *Submission 97*, p. 14.

families.³⁴ This increase accounts for around 0.5 per cent of the 0.7 per cent consumer price impact that introduction of the tax will have on households.³⁵

7.39 The Australian Food and Grocery Council (AFGC), however, doubt the accuracy of the government's modelling. They take the view that the cost of groceries for families will increase under a carbon tax and question the modest increase that the government has modelled:

AFGC Chief Executive Kate Carnell said there's no doubt that costs will increase right across Australia's supply chain, predominantly due to the increased costs of power... AFGC is perplexed by Treasury figures announced today by the Prime Minister, regarding the price rises of food and grocery products on supermarket shelves. The Treasury modelling appears not [to] have been released – we urge them to release these figures.³⁶

7.40 The National Association of Retail Grocers of Australia (NARGA) has also questioned the accuracy of the government's modelling of the impact of a carbon tax on grocery prices:

It is unlikely that the complex nature of the grocery supply chain has been modelled effectively to determine the impact on grocery prices of the carbon (dioxide) tax and associated changes to the fuel excise system.³⁷

7.41 In their submission to the committee NARGA stated that supermarkets would either decrease their staffing levels or increase their grocery prices to recoup the additional operating costs incurred as a result of the imposition of a carbon tax:

The first year's price increase will cost the average supermarket an average of \$15,000 which would need to be recouped through higher retail prices or reduced staffing levels.³⁸

7.42 The government has acknowledged the negative effects that the introduction of a carbon tax will have on everyday consumers, announcing that compensation would be paid to households to offset the impact of the tax's introduction.

More expensive cars

7.43 While its exclusion will ensure that households and small businesses do not pay the tax on the fuel used in their cars,³⁹ the cost of cars is expected to rise.

34 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, <http://treasury.gov.au/carbonpricemodelling/content/overview/page8.asp>.

35 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, <http://treasury.gov.au/carbonpricemodelling/content/overview/page8.asp>.

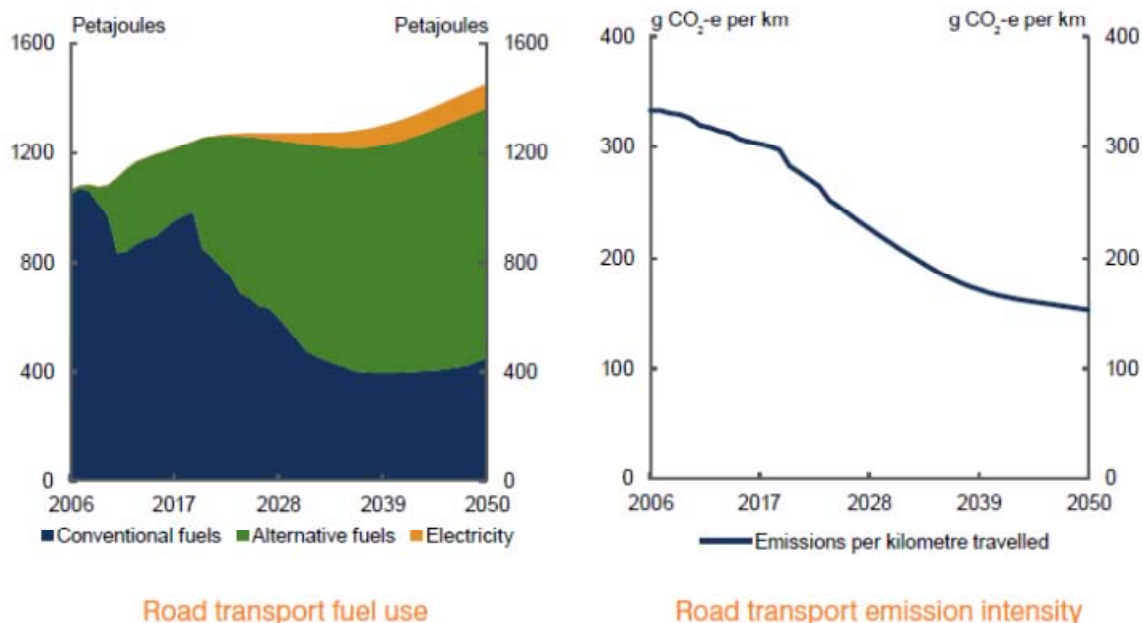
36 Australian Food and Grocery Council, Carbon tax still impacts Australian food and grocery costs, Media Release, 10 July 2011.

37 National Association of Retail Grocers of Australia, *Submission 91*, p. 3.

38 National Association of Retail Grocers of Australia, *Submission 91*, p. 2.

7.44 Government modelling suggests that by 2050 not only will emissions per kilometre travelled nearly be half the level they are today, but the reliance on conventional fuels will also have substantially declined.

Graphic 7.4.: Forecast vehicle emissions (to 2050) per kilometre travelled⁴⁰



7.45 In hearings the committee heard evidence from the Federal Chamber of Automotive Industries and the Federation of Automotive Products Manufacturers, who noted that their industries will be severely impacted by the changes. They cited research conducted by PriceWaterhouseCoopers into the potential impact of a carbon price on the automotive industry:

The cost to the domestic automotive industry is likely to be in the order of \$30 million to \$84 million per year depending on various factors including compensation.⁴¹

7.46 The increase in manufacturing costs as a result of the carbon tax will flow through to consumers so, although household fuel consumption will not be subject to the carbon tax, the incidence of a carbon tax will translate into higher vehicle

39 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, p.11

40 Department of the Treasury, *Strong growth, low pollution – modelling a carbon price: Overview*, p. 11

41 PriceWaterhouseCoopers, *Potential impact of a carbon price on the Australian automotive industry*, May 2011, p. 8.

prices. Research conducted suggests that without compensation, new vehicles could increase by between \$222 and \$412.⁴²

Australian Households under a carbon tax

7.47 The introduction of the carbon tax is going to hurt families. The government's compensation package for households is insufficient. It will not cover the cumulative increase in the costs of a basket of goods – when pressed on this point, Treasury revealed that they have not publicly released the basket of goods used in their analysis of the price impact on consumers of the proposed carbon tax:

CHAIR: Has Treasury been asked by industry associations or others for details on the basket of goods that is used to calculate the cost-of-living impact?

Mr Robinson: Yes, we have had inquiries from industry associations on the composition of price changes by different commodity groupings.

CHAIR: Did you provide that information?

Mr Robinson: At this stage we have been talking to government about the release of such information.

CHAIR: So the answer is that so far you have not released that information?

Mr Robinson: Not at this stage, Senator.⁴³

7.48 On further questioning as to the basket of goods used in modelling the impact of a carbon tax on consumers, Treasury explained that they relied on information used in the 2003–04 household expenditure survey?

Mr Robinson: The modelling that we have undertaken uses PRISM, which was the same model that was used to undertake analysis of the impact of the introduction of the GST back in 2000. The distributional component of that PRISM modelling has underlying it the household expenditure survey.

CHAIR: Is that the 2003-04 household expenditure survey?

Mr Robinson: That is correct. That information from the 2003-04 household expenditure survey has been comprehensively updated to reflect our best estimates of what the world would look like in 2012-13. So, for example, it takes account of historical price changes for different commodity classes—say, for example, historical electricity price changes.

42 PriceWaterhouseCoopers, *Potential impact of a carbon price on the Australian automotive industry*, May 2011, p. 8.
http://www.fcail.com.au/library/publication//final_pwc_automotive_industry_report_11_may_2011pwc.pdf (Accessed 16 September 2011).

43 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mr Marty Robinson, Manager, Household Modelling and Analysis Unit, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 12.

Then we have also incorporated future projections of price growth out to 2012-13. The modelling then goes through the process of looking at what the impact of the price changes will be on specific groups of commodities underlying the CPI. That is what leads us to an estimate of the overall impact of the CPI, built up from underlying commodity group estimates.

CHAIR: So, if it is based on the 2003-04 household expenditure survey, what is the sensitivity? Why is there an issue with providing that information to industry associations and others, for that matter, so that it can be properly scrutinised?

Mr Robinson: The government has published in the reports the headline increases. The majority of the price impacts are actually driven by changes in electricity prices. So the key drivers of impacts for households are actually electricity prices, which are estimated to go up by about 10 per cent, and gas prices, going up by about nine per cent. The majority of the other goods and services that households typically consume—food was one of the examples given—would typically rise by less than half of one per cent.⁴⁴

7.49 Treasury have not explained the sensitivity associated with releasing the information concerning the basket of goods used to model the impacts of the carbon tax on households and although the Household Expenditure Survey examines average expenditure on health services, the general nature of the government's modelling on the estimated impact on health costs suggests that the basket of goods used to model the impact of the carbon price should be released:

Treasury estimate that households will face a price impact on health services of around 0.3 per cent in 2012-13 under a \$23 carbon price. Health services include hospital and medical services, optical and dental services, and pharmaceuticals. Estimating the impact on household goods and services has been undertaken across broad product categories and the estimates represent the average price impacts across each category. Within each category there will be a range of goods with different levels of direct and indirect emissions intensity. Some items may have higher price impacts than the average while other items may be lower.⁴⁵

7.50 The reticence on the part of government to release this information raises further questions around the veracity of their modelling.

7.51 Indeed, when questioned as to the accuracy details of the numbers of families and households in each income bracket that will be impacted by the carbon tax, Treasury was unable to provide specific detail:

44 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes and Mr Marty Robinson, Manager, Household Modelling and Analysis Unit, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 12.

45 Department of the Treasury, Answer to question taken on notice on 10 August 2011, question 8, received between 29 August and 26 September.

The individual characteristics of households and families are detailed and varied. The survey data underlying the models used to develop distributional estimates contains a comprehensive cross-section of different household types and income levels, which underpins the estimates that nine out of ten households will receive assistance, almost six million households will receive assistance that covers all of their average expected price impact and over four million households will receive assistance that is at least 20 per cent more than their average expected price impact. However, it is not possible to accurately estimate the number of households represented at each income point for each household cameo included in the Supporting Australian households publication. Recognising this, the publication seeks to provide information about the elements of the household assistance package most applicable to a selection of different household types at different income levels, as well as distributional information about the broader Clean Energy Future policy.⁴⁶

7.52 In announcing the compensation package for households the government has boasted that many Australian families will be better off as a result of the changes to the marginal tax rates. However, as Treasury acknowledge, it is not possible to identify accurately the number of households in each income bracket as income brackets do not reflect effective marginal tax rates. Furthermore, Treasury have acknowledged that effective marginal tax rates will be impacted by the changes contained in the government's legislative package.

CHAIR: The Prime Minister and the Treasurer have made much of the lower effective marginal tax rate in the \$16,000 to \$20,000 range. Can you just confirm that effective marginal tax rates are higher for incomes above \$20,500?

...

Mr Robinson: There are a few changes in effective marginal tax rates through those income ranges. As a result of a very large increase in the tax-free threshold there have been some adjustments to the marginal rates such that the 15 per cent rate increases to 19 per cent, **which has increased the effective marginal tax rate between \$20,542 and \$30,000.** [emphasis added] Beyond that point, the old effective marginal tax rate of 15 per cent plus the four per cent withdrawal of the low-income tax offset means that there has been no change to the effective tax rate between \$30,000 and \$37,000.

CHAIR: So it increases between \$20,500 and—

Mr Robinson: And \$30,000.

...

CHAIR: And you have just confirmed that people earning incomes between \$20,500 and \$30,000 will pay a higher effective marginal tax rate.

46 Department of the Treasury, Answer to question taken on notice on 10 August 2011, question 7, received between 29 August and 26 September.

Then everybody earning more than \$37,000 will also pay a higher effective marginal tax rate, won't they?

Mr Robinson: That is not correct. The effective marginal tax rate beyond \$30,000 up to about \$66,600 is still the same. That is basically through rebalancing. Under that current tax scales, if you like, there is a 30 per cent marginal rate which kicks in from \$37,000. There is also the four per cent withdrawal of the low-income tax offset on that.

CHAIR: Sure.

Mr Robinson: So the effective rate is 34 per cent. Effectively, what the government has done is to reduce the withdrawal of the low-income tax offset to 1½ per cent and to put an extra 2½ per cent into the statutory marginal rate. So the 32½ plus 1½ still adds up to 34, leaving the effective rate unchanged between—

CHAIR: At what income level does the effective marginal tax rate increase again compared to the status quo?

Mr Robinson: **Between \$67,500 and \$80,000 the effective rate will have increased by 2½ per cent.** [emphasis added]

CHAIR: What is going to be the increase in the effective marginal tax rate for people on incomes between \$20,500 and \$30,000, in percentage terms?

Mr Robinson: Four per cent.

CHAIR: Four per cent.

Mr Heferen: Bear in mind that the average tax rate for those people still goes down.

CHAIR: Sure. But I do not have time to go through that; I will focus on what I want to ask questions about. Clearly, on page 10, in your tax reform discussion paper you found it important enough to focus on effective marginal tax rates and to present that information in chart 2. People earning between \$20,500 and \$30,000 will now have a four per cent higher effective marginal tax rate and people earning between \$67,500 and \$80,000 will have a 2½ per cent higher effective marginal tax rate. What modelling have you done on account of participation effects of these lower and higher effective marginal tax rates?

Mr Heferen: We have done no modelling. Clearly, a 2½ point effective marginal tax rate, which is further obscured by the fact of that low-income tax offset itself—part of that comes in a person's pay and part of it has to be done on assessment. So you would have to be very careful about the judgment of a person where they take on an extra amount of work, with that fine level of distinction and at that level of income.⁴⁷

47 Senator Mathias Cormann, Chair of the Senate Select Committee on the Scrutiny of New Taxes; Mr Marty Robinson, Manager, Household Modelling and Analysis Unit, Department of the Treasury, Department of the Treasury and Mr Rob Heferen, Executive Director, Revenue group, Department of the Treasury, *Committee Hansard*, 10 August 2011, pp 13–14.

7.53 There is. However, some question about the extent to which the number of households impacted by an increased effective marginal tax rate has been modelled as, although information has been released that there are approximately 450,000 people who earn between \$16,000 and \$20,500 and who will therefore receive a tax cut, Treasury have been unable to provide advice as to the number of people who earn between \$67,500 and \$80,000 and who therefore, will face an effective marginal tax rate 2.5 per cent higher than is currently the case.⁴⁸

Reaction to the compensation package

7.54 The Australian Council of Social Service raised concerns about the government's compensation package. In particular, with the way in which compensation levels have been determined, citing a concern that the method used entrenches existing inequities in the social welfare system:

... we are disappointed that compensation levels have been determined based on household income and not expenditure. This means that existing inequities in Australia's income support system will continue through the carbon price mechanism as those on lower allowances receive the lowest levels of compensation.

For example someone on Aged Pension, Carers of Disability Support Pension will receive an increase of \$338 per year compared to \$218 for someone on the unemployment Newstart Allowance. This is unfair and brings a level of inequity into the compensation aspects of the scheme.

...

It should also be noted that allowance recipients are not eligible for the Utilities Allowance of \$10 per week, which adds to the inequity in the face of surging electricity and gas prices.⁴⁹

Committee comment

7.55 The evidence the committee has received clearly shows that the introduction of a carbon tax will increase prices across all consumer goods, including electricity, gas and groceries, and lead to increased prices in other goods and services across the economy.

7.56 The committee is of the view that the Treasury modelling has underestimated the impact of the carbon tax on the cost of living. The committee's views about the flaws in the Treasury modelling are discussed in more detail in chapter 10.

48 Department of the Treasury, *Committee Hansard*, 10 August 2011, pp 13–14.

49 Australian Council of Social Service, *ACOSS welcomes agreement on carbon price mechanism*, Media Release, 10 July 2011, http://www.acoss.org.au/media/release/acoss_welcomes_agreement_on_carbon_price_mechanism (accessed 16 September 2011).

7.57 The committee is concerned about the impact that higher costs, particularly higher prices for food and energy, will have for low and middle income families and draws attention to the fact that, although households can be compensated for any initial price increases, due to the second round effects, the cost to these families of the introduction of a carbon tax can never be accurately calculated or compensated.

7.58 The committee finds that households in regional Australia are likely to be worse off under a carbon tax. For regional Australians, the greater the distance, the greater the cost. Treasury figures reveal that regional Australians pay anywhere from 10 per cent to 43 per cent more for electricity than those in capital cities. This disparity alone would wipe out the estimated 20 cents per week that Treasury estimates the average Australian would be better off. In addition, regional Australians will be hit again once the eventual inclusion of transport fuel is added to the cost of groceries and other essential items.

Chapter 8

The carbon tax and the economy

Introduction

8.1 Chapter 8 provides an assessment of the impact and implications of the proposed carbon tax on the economy and the government's budget.

8.2 It will consider the following issues:

- the Commonwealth Budget for the government's climate change plan, as set out in the fiscal tables in the Explanatory Memorandum to the Clean Energy Bill 2011, released on 13 September 2011;
- aspects of the overall scheme not contained in those tables, in particular, the program for 'closure of around 2000 megawatts of highly polluting generation capacity by 2020';¹
- the effect of the overall scheme on the Commonwealth budget deficit, including its impact on the return to surplus; and
- the impact of the carbon tax on the economies of New South Wales, Victoria, Queensland and Western Australia.

The government's climate change plan and the Commonwealth Budget

8.3 On 21 December 2010 the Multi-Party Climate Change Committee (MPCCC) issued a communiqué, which stated:

Budget neutrality: The overall package of a carbon price mechanism and associated assistance measures should be budget-neutral. This does not preclude other measures to address climate change being funded from the Budget, consistent with the Government's fiscal strategy.²

8.4 Budget neutrality was raised at the Senate Estimates hearing on 25 May 2011:

Senator BIRMINGHAM: The proposal will be developed consistent with the principle that the overall package of a carbon price mechanism and associated assistance measures should be budget-neutral.

1 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 71.

2 Communiqué of the Multi-Party Climate Change Committee, 21 December 2010 <http://www.climatechange.gov.au/en/government/initiatives/multi-party-committee/meetings/third-meeting/communique.aspx#attachmента> (accessed 17 August 2011).

Mr Tune: So we would interpret that, in the department of finance, as being budget-neutral over the course of the forward estimates.

Senator BIRMINGHAM: There is no commitment from the government, though, as regards to the surpluses that apply in the forward estimates at present, that none of them will be undermined to some extent by a revenue-neutral budget carbon price mechanism.

...

Senator Wong: Our commitment to the surplus remains. In relation to the carbon price, those decisions have not yet been made, and when they are made we will account for them in the usual way.

Senator BIRMINGHAM: Has the department of finance provided any advice on budget-neutrality and what the expected approach to the carbon pricing mechanism would be?

Mr Tune: No, Senator, no, other than what is stated in the budget papers.³

8.5 The carbon tax and budget-neutrality were addressed in the Statement of Risks section of the Commonwealth Budget Papers:

The Government has proposed that a carbon price mechanism commence on 1 July 2012. The proposal involves a two-stage process starting with a fixed price period for three to five years before transitioning to an emissions trading scheme. As details of the carbon price mechanism are yet to be determined, no financial implications associated with the introduction of a carbon price have been included in the forward estimates. This is consistent with past practice. The proposal will be developed consistent with the principle that the overall package of a carbon price mechanism and associated assistance measures should be budget-neutral.⁴

8.6 Speaking on the 'PM programme' on ABC Radio on 11 July 2011, the Treasurer, the Hon. Wayne Swan MP, stated:

It is **broadly** budget neutral over the forward estimates. Over the forward estimates, the costs are relatively modest. We will bring the budget back to surplus in 2012/13.⁵ [**emphasis added**]

3 Senator Simon Birmingham and the Minister for Finance and Deregulation Senator the Hon. Penny Wong and Mr David Tune, Secretary, Department of Finance and Deregulation, *Estimates Hansard*, 25 May 2011, pp 180 - 181, <http://www.aph.gov.au/hansard/senate/commtee/s59.pdf> (accessed 19 September 2011).

4 Australian Government, *2011-12 Australian Government - Budget Paper No. 1: Budget Strategy and Outlook*, pp 8 - 5.

5 ABC Radio <http://www.abc.net.au/pm/content/2011/s3266743.htm> (accessed 17 August 2011).

8.7 The most recent fiscal tables outlining the anticipated budgetary effect of the government's Clean Energy Plan can be found in the Explanatory Memorandum to the Clean Energy Bill 2011.⁶

8.8 The sale of permits during the fixed-price period is expected to raise \$25,620 billion. An additional \$1,640 billion should be generated from the application of a carbon price via other measures and fuel tax credit reductions, for total revenue of \$27,260 billion.

8.9 According to the costs set out in Fiscal Table 1 of the Explanatory Memorandum to the Clean Energy Bill 2011, the total cost of the climate change plan is, therefore, anticipated to be \$31,269 billion.

8.10 The result is an anticipated net cost to the budget of more than \$4 billion over the four years to 2014-15. As discussed below, this figure does not include measures that are to be funded outside the government's climate change plan budget, including the contingency reserve.

8.11 Therefore, the government is proposing to plunge the Commonwealth Budget further into deficit while at the same time and based on its own modelling, Australia's domestic emissions will actually rise by around 90 million tonnes in 2020.

Additional government measures not included in the climate change plan budget

8.12 As stated above the budget for the government's climate change plan is set out in Fiscal Table 1 of the Explanatory Memorandum to the Clean Energy Bill 2011. Taken together, the measures in Fiscal Table 1 result in a deficit for the government's climate change plan of \$4,008 million. Other, important aspects of the government's overall climate change plan, particularly relating to compensation packages and industry assistance, are budgeted for separately to the plan itself. The bulk of those measures are included in Fiscal Table 3 of the Explanatory Memorandum. They are expected to increase the net cost to the budget to \$4,424 million by 2014-15.⁷ When those measures not included in the Fiscal Tables (as set out in Table 8.1 below) are added, they increase the net cost of the government's climate change plan to \$4,448.8 million by 2014-15.

8.13 The steel and coal industries will be particularly affected by the government's carbon tax and have been promised assistance that is not included in the climate change plan budget. These measures are outlined below.

6 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, pp 41 - 42.

7 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, pp 41 - 42.

8.14 Under the Steel Transformation Plan, the government has promised \$189 million of assistance to the steel industry over four years⁸ 'to encourage investment and innovation in the Australian steel manufacturing industry'.⁹

8.15 The Coal Sector Jobs package will provide \$696 million in funding as 'transitional assistance to help the coal industry'¹⁰ to implement carbon abatement technologies for the mines that produce the most carbon pollution'.¹¹

8.16 A further \$41 million is to be used as part of the Coal Mining Abatement Technology Support Package¹² to 'provide support for the development and deployment of technologies to reduce fugitive emissions from coal mines'.¹³

8.17 However, there are additional measures that will form part of the government's implementation of its climate change plan which are not included in the Explanatory Memorandum or in either Appendix C or D to *Securing a clean energy future: The Australian government's climate change plan*. These measures are set out below.

Australian Competition and Consumer Commission funding

8.18 One of these measures is the allocation of \$12.8 million over four years to the Australian Competition and Consumer Commission (ACCC) to set-up a team to investigate any misleading or deceptive conduct by businesses about the effect of the carbon tax on prices and educate businesses on their rights and responsibilities under the government's plan.¹⁴

8.19 It should be noted that, as the permits issued under the Plan are financial products, any misleading or deceptive conduct relating to them comes within the

8 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, p. 42.

9 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf> (accessed 10 July 1011).

10 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, p. 42.

11 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf> (accessed 10 July 1011).

12 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, p. 42.

13 Australian Government, *Clean Energy Factsheet – Supporting Jobs and Industry*, <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/06/012-FS-Supporting-jobs-and-industry.pdf> (accessed 10 July 1011).

14 'ACCC to prevent carbon price gouging', *The Age*, 13 July 2011 <http://news.theage.com.au/breaking-news-national/accc-to-prevent-carbon-price-gouging-20110713-1hcxv.html>, (accessed 19 September 2011).

jurisdiction of the Australian Securities and Investments Commission and not the ACCC.¹⁵

Advertising and community awareness

8.20 On 16 June 2011, almost a month before it announced its climate change plan, the government announced a national advertising campaign to sell the carbon tax. The Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, has stated that the campaign will cost \$12 million.¹⁶ This is in addition to an allocation of \$8.2 million in the 2011-12 Commonwealth budget for the Climate Change Foundation Campaign, which will fund a \$3 million grants program, as well as 'partnerships and other community engagement activities'.¹⁷

8.21 It has been suggested that the total cost of all government advertising to support its carbon tax is closer to \$25 million, when the cost of leaflets and websites is added in.¹⁸

Table of non-Plan revenues and outlays

8.22 The table below sets out the major revenues and outlays for the carbon tax plan that are not included in the government's climate change plan budget. Cumulatively, it represents a net \$440.8 million hit to the government's budget over the next four years. However, to an extent it represents a conservative expression of the total costs of the government's climate change plan, as it does not include the contracts for closure program.

8.23 The figures contained in the table below are sourced from the Explanatory Memorandum to the Clean Energy Bill 2011, unless otherwise cited.

15 *Australian Securities and Investments Commission Act 2001*, ss12DA - 13DB.

16 The Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, Climate change public information campaign, Media Release, 16 June 2011 <http://www.climatechange.gov.au/minister/greg-combet/2011/media-releases/June/mr20110616.aspx> (accessed 18 August 2011).

17 Australian Government, Portfolio Budget Statements 2011-12: Budget Related Paper No. 1.4: Climate Change and Energy Efficiency Portfolio, Commonwealth of Australia, Canberra, 2011, p. 23. <http://climatechange.gov.au/en/about/budget/~media/publications/budget/1112/2011-12-pbs.pdf> (accessed 8 September 2011).

18 Ross Peake, 'Gillard, Abbott in campaign cost debate', *Canberra Times*, 18 July 2011, p. 3.

Table 8.1: Revenues and outlays in relation to the carbon tax not included in the fiscal tables, Government stand alone measures (in millions)¹⁹

Measure	Outlays					Revenue	Net Total
	ACCC	Advertising & Grants Program	Steel Transform'n Plan	Coal Sector Jobs Package	Coal Mining Abatement Package	Fuel-tax reduction (Heavy on-road transport)	
2011-12		-\$12±	-\$1	-\$222	0		-\$235
2012-13			-\$38	0	-\$11		-\$49
2013-14			-\$75	-\$231	-\$16		-\$322
2014-15	-\$12.8*		-\$75	-\$243	-\$15	\$510†	\$164.2
Total	-\$12.8	-\$12	-\$189	-\$696	-\$41‡	\$510	-\$440.8‡

* Funding allocated over the budget years 2011-12 to 2014-15

± The duration of this funding is unclear but is likely to extend beyond the 2011-12 financial year

† This program represents the application of an effective carbon tax to heavy on-road vehicles, commencing in 2014-15. See Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 133.

‡ Numbers may not add due to rounding.

Combined outlays and revenues under the carbon tax

8.24 The table and graphic below bring together the combined MPCCC and government revenues and outlays to highlight a combined deficit of \$4,449.8 million.

Table 8.2: Total revenues and outlays under the carbon tax agreed by the MPCCC and the government's stand alone measures²⁰

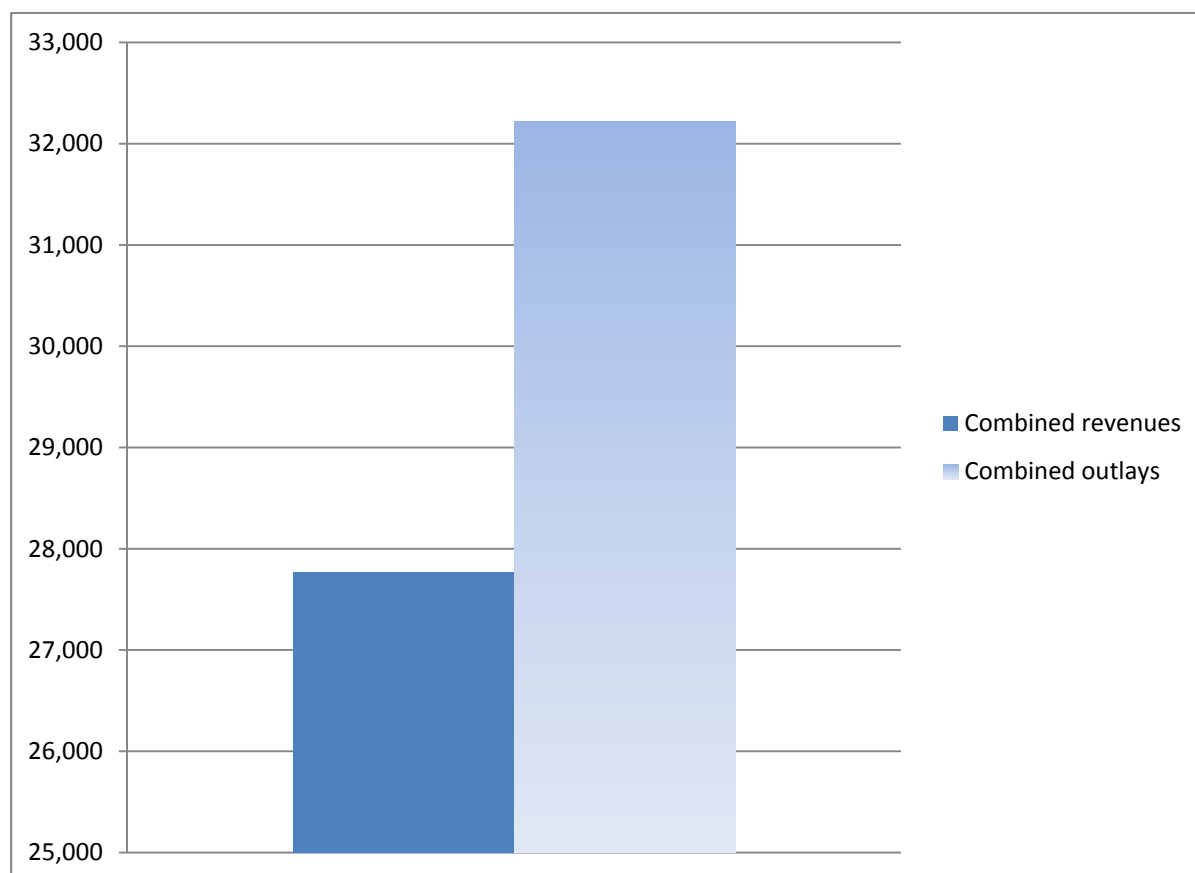
Year	MPCCC and government combined revenues (\$m)	MPCCC and government combined outlays (\$m)	Difference (\$m)
Total	27,770	32,219.8	- 4,449.8 ²¹

19 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, p.42 and paras: 3.95 – 3.99 of this Report.

20 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, pp 41 – 42 and paras: 3.95 – 3.99 of this Report.

21 Note: Discrepancies with other figures used in this report are due to rounding.

Graphic 8.1: Total revenues and outlays under the carbon tax agreed by the MPCCC and the government's stand alone measures²²



Clean Energy Finance Corporation

8.25 The government's carbon tax plan includes the establishment of the Clean Energy Finance Corporation (CEFC). The CEFC is included in the climate change plan budget. Its purpose is to invest in:

... businesses seeking funds to get innovative clean energy proposals and technologies off the ground ... the commercialisation and deployment of renewable energy, energy efficiency and low-pollution technologies (and manufacturing businesses that provide inputs for these sectors'.²³

8.26 It 'will not invest in carbon capture and storage technology, which is supported through existing programs'.²⁴

22 Australian Government, *Explanatory Memorandum to the Clean Energy Bill 2011*, pp 41 – 42 and paras: 3.95 – 3.99 of this Report.

23 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 64.

24 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 65.

8.27 The National Generators Forum has been critical of the establishment of the CEFC, arguing that there was not consultation with the power industry about its establishment and that direct government intervention in the system will create investor uncertainty.²⁵

8.28 The CEFC is to receive funding of \$10 billion over five years from 2013-14. Capital returned from its investments will be reinvested. At the Committee hearing on 10 August 2011, Treasury officials indicated that its loans would be commercial in the sense that they would:

... not necessarily mean the market rate or the hurdle rates that that these businesses would need to go through. There are a large number of potential clean energy and renewable projects out there that cannot get finance for a range of reasons and the purpose of the entity, the CEFC, is to leverage private sector investment in this area.²⁶

8.29 It is intended that these loans 'will earn a positive return', however, any drop in the value of investments by the CEFC would impact on the government's balance sheet.²⁷

8.30 In response to a question taken on notice at the hearing on 10 August 2011 the Treasury has advised that:

Recipients of commercial loans provided by the CEFC are expected to be charged an interest rate comparable to that offered by lenders in the private sector.

The objective of the CEFC is to remove market barriers that would otherwise hinder the financing of large-scale clean energy and renewable projects. That is, the CEFC will operate in the 'market gap', encouraging projects that wouldn't otherwise proceed by providing an alternative source of debt or equity to underpin a project's financial viability.²⁸

8.31 In response to another question taken on notice on 10 August 2011, Treasury's expectation is that around \$30 million of the operating expenses of the CEFC will be an allowance for defaults on loans. While this will impact on gross debt, Treasury

25 National Generators Forum, *Submission 174*, on the Clean Energy Legislative Package at <http://www.climatechange.gov.au/government/submissions/clean-energy-legislative-package/~media/government/submissions/cel/public/CEL-Submission-NationalGeneratorsForum-20110922-PDF.pdf> (accessed 22 September 2011) pp 6 - 8.

26 Ms Luise McCulloch, General Manager, Industry, Environment and Defence Division, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 8.

27 Ms Luise McCulloch, General Manager, Industry, Environment and Defence Division, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 9.

28 The Treasury, *Response No. 18 to Questions on Notice, Question 3*, http://www.aph.gov.au/Senate/committee/scrutinynewtaxes_ctte/carbontax/submissions.htm, p. 4.

maintains that over times the CEFC will be generate a positive return on its investments, through interest and dividends.²⁹

8.32 Another body established by the government as part of its climate change plan is the Australian Renewable Energy Agency. The government has provided for the revenue neutrality of the Agency on the basis that it will receive future funding from dividends paid by the CEFC.³⁰ No statement has been made by the government on what plans have been put in place should dividends from the CEFC not meet the Agency's costs.

Contracts for closure program and the use of contingency reserve

8.33 Potentially, the aspect of the government's climate change plan not included in the government's climate change plan budget that has the greatest financial impact is the commitment to 'seek to negotiate the closure of around 2000 megawatts of highly polluting electricity generation capacity by 2020'.³¹

8.34 The program is to be implemented by the Department of Resources, Energy and Tourism, which will call for expressions of interest from eligible generators. It has described the measure as a 'modest ... element of the Energy Security Fund' and stated that the government 'has allocated a certain amount in the Contingency Reserve beyond 30 June 2016 to support delivery of contract for closure'.³²

8.35 On 8 June 2011, the committee heard evidence concerning the cost of closing power stations like Hazelwood, in Victoria's Law Trobe Valley, from the Energy Supply Association of Australia (ESAA):

I would expect that if we are talking about the closure of whole plants, not individual generation units within them, then it is not going to be in the tens of billions per plant and it is unlikely to be in the hundreds of millions, although it could be in the very high hundreds of millions. I would think it would most likely be in the low single-digit billions of dollars. But, again, there are many different ways that such a scheme could be constructed and a competitive process is going to be the best one to sort out exactly what it does take for these things to close.³³

29 The Treasury, *Response No. 18 to Questions on Notice, Question 4*, http://www.aph.gov.au/Senate/committee/scrutinynewtaxes_ctte/carbontax/submissions.htm, p. 5.

30 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 122.

31 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. vii.

32 Australian Government, *Clean Energy Future - Securing a clean energy future: The Australian Government's Climate Change Plan*, p. 65.

33 Mr Brad Page, Chief Executive Officer, Energy Supply Association of Australia, *Committee Hansard*, 8 June 2011, pp 6 - 7.

8.36 In Question Time on 6 July 2011, the Minister for Finance and Deregulation Hon. Senator Penny Wong, was asked about the use of the contingency reserve to fund the closure of power stations. She stated:

The contingency reserve is not a general policy reserve. It is not a rainy day fund. It is true that no provision was made in the [contingency reserve] CR as at the 2011-12 budget for the carbon price because details of the proposal and financial implications of such were yet to be determined by government. As we said in the budget papers, as we have said since, we will update the figures associated with the carbon price package in the usual way after the policy has been finalised.³⁴

8.37 On 11 July 2011, the Prime Minister, the Hon Julia Gillard MP, stated on radio in Perth that the government had 'made provision in the contingency reserve' for the closure of some power stations.³⁵

8.38 An article in *The Australian* on 13 July 2011 quoted unnamed industry sources as saying its owners would seek 'close to \$3bn' for Hazelwood Power Station.³⁶ The same article quoted the Deputy Leader of the Australian Greens, Senator Christine Milne, as saying that contracts for closure of power stations would be funded from carbon tax revenues and not from consolidated funds or general revenue raised by taxpayers.³⁷

8.39 On 19 July 2011, it was reported that the Minister for Resources, Energy and Tourism, the Hon. Martin Ferguson AM MP, stated 'there is no bottomless pit of taxpayer dollars' to fund the contract for closure program.³⁸

8.40 On 22 July 2011, *The Australian Financial Review* reported that:

Alinta Energy has warned the federal government will have to pay it up to \$250 million to close its ageing coal-fired Playford power station in South Australia, more than double the government's estimate. ... Extrapolating from Alinta's estimates, retiring 2000 megawatts would cost about \$2 billion.³⁹

34 *Senate Hansard*, 6 July 2011, pp 4169 - 70.

35 Annabel Hepworth and Dennis Shanahan, 'Shutting power plants will cost another \$3bn', *The Australian*, 13 July 2011, p. 6.

36 Annabel Hepworth and Dennis Shanahan, 'Shutting power plants will cost another \$3bn', *The Australian*, 13 July 2011, p. 6.

37 Annabel Hepworth and Dennis Shanahan, 'Shutting power plants will cost another \$3bn', *The Australian*, 13 July 2011, p. 6.

38 Annabel Hepworth, 'ALP puts limits on dirty coal compo', *The Australian*, 19 July 2011, p. 1.

39 Mark Ludlow and Peter Kerr, 'Payouts fail to please', *Australian Financial Review*, 22 July 2011, p. 9.

8.41 According to a report in *The Age* on 26 August 2011, the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, has said that 'the government intended to drive a hard bargain to get value for taxpayers from the pay-to-close program'.⁴⁰

8.42 Treasury officers were asked about provisions in the budget for the use of the contingency reserve to fund the closure program at the Committee hearing on 10 August 2011. It is appropriate to quote the exchange at a greater than usual length:

CHAIR: Have provisions been made in the contingency reserve already for the buyout of so-called dirty coal fired power stations?

Mrs McCulloch: Yes.

CHAIR: And that is within the \$4.3 billion?

Mrs McCulloch: The \$4.3 billion relates to the forward estimates. Some provision is beyond the forward estimates.

CHAIR: When you say 'provisions have been made', has that money already been appropriated, or will it have to be appropriated by the parliament?

Mrs McCulloch: At the time a decision is made it will be appropriated by the parliament.

...

CHAIR: Has Treasury assessed the fiscal impact of the carbon-pricing package beyond the forward estimates?

Mrs McCulloch: No.

CHAIR: You have not assessed it?

Mrs McCulloch: No.

Dr Gruen: What do you mean by assessed? Are we aware of the numbers—is that the question?

CHAIR: Are you aware of the numbers?

Dr Gruen: Not me personally.

40 Tom Arup, 'Tough line on power buyouts', *The Age*, 26 August 2011, p. 8.

Mrs McCulloch: No. We have not assessed the totality of the package beyond the forward estimates.⁴¹

8.43 The conclusion that can be reached from this is that the funds for the contract for closure program will come from the contingency reserve, contrary to an assurance given by the Minister for Finance and Deregulation on 6 July 2011. However, the government and Treasury have not accounted for it in the budget as any decisions about those payments are expected to be made outside the forward estimates, that is, after 30 June 2016.

Effect of the carbon tax plan on the return of the Commonwealth Budget to surplus

8.44 In its Commonwealth Budget for the fiscal year 2010-11 the government indicated that it intended to return the budget to surplus by 2012-13.

8.45 In Question Time on 16 August 2011, the Treasurer, the Hon. Wayne Swan MP, indicated that the government 'is committed to returning the budget to surplus despite global difficulties'.⁴²

8.46 Also on 16 August 2011, the Prime Minister, the Hon. Julia Gillard MP, on the other hand, was slightly less certain of the government's intentions, stating that it is 'determined to return the budget to surplus'.⁴³

Effect of the carbon tax plan on state government budgets

8.47 While the Commonwealth government's budget will be affected by its clean energy policy, so too will the budgets of state governments. This is particularly so for those states that are resource rich and/or reliant on coal for their energy security. It is, therefore, not surprising that a number of states have commissioned their own analysis of the effect of the carbon tax on their economies, at both a state-wide and regional level.

8.48 The committee notes that, in its modelling report, Treasury states:

It is difficult to quantify the impact of carbon pricing at a sub-state regional level due to limitations on the level and quality of data available. Over time,

41 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mrs Luise McCulloch, General Manager, Industry, Environment and Defence Division, Department of Treasury, *Committee Hansard*, 10 August 2011, pp 3 - 4.

42 The Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, *House of Representatives Hansard*, 16 August 2011, p. 13.

43 The Hon. Julia Gillard MP, Prime Minister, *House of Representatives Hansard*, 16 August 2011, p. 17.

carbon pricing will encourage resources to move between regions, but reliable information on which to project these movements is not available.⁴⁴

8.49 This issue was raised with Treasury officers by the committee on 10 August 2011:

Ms Quinn: We would question all of the results based on subregional information which assumes fixed shares from history and applies it to a dynamic forecast of the future. We think that does not provide balanced results and we do not consider them robust.

CHAIR: So you do not think that New South Wales Treasury is better placed to understand the nuances of the New South Wales electricity generation and distribution sector?

Ms Quinn: I am not questioning New South Wales Treasury's ability to do analysis; I am questioning results from a set of information that does not take account of behavioural information over time.⁴⁵

8.50 It is worth noting with respect to Ms Quinn's evidence that, as discussed in Chapter 7, Treasury's own estimates of the price impacts of the carbon tax, based on the PRISMOD model, do not take account of behavioural changes. Why such analysis would be appropriate when undertaken by the Commonwealth Treasury, but not when undertaken by others was not explained to the committee.

8.51 Taking all of that that into account, the committee believes that the states' analyses cannot be dismissed. Treasury has not questioned the capacity of the states to do the analysis and they represent the only attempts to examine the effects of the carbon tax at regional levels.

New South Wales

8.52 NSW Treasury has made a submission to the committee that addresses, in part, the effect of the government carbon tax plan on its budget.⁴⁶ In summary, based on modelling by Frontier Economics, NSW Treasury concludes that:

Gross State Product - At 2030, the reduction in NSW GSP is the greatest of any mainland State, at (-)1.53 per cent. In real terms (after adjusting for inflation), the loss of output in NSW is \$3.7 billion a year in 2020 rising to \$9.1 billion in 2030.

44 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011 p. 121.

45 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, Macroeconomic Modelling Division, Macroeconomic Group, Department of Treasury, *Committee Hansard*, 10 August 2011, p. 11.

46 NSW Treasury, *Submission 81*.

Employment – At 2030, employment is expected to be 31,000 less than in the reference case.⁴⁷

8.53 Based on partial pass-through of the carbon price, NSW Treasury states that the loss to its state budget will be \$369 million. Its high estimate, based on full pass-through is \$396 million.⁴⁸

8.54 In particular, certain regions of NSW will suffer more than others. Modelling indicates that the Hunter region will be the hardest hit in Australia, with an absolute reduction of 18,500 jobs at 2020. The Central West region is expected to have about 1,000 fewer jobs at 2020 and the Illawarra will experience slower job growth, having 7,000 fewer jobs at 2020.⁴⁹ These findings take into account the Jobs and Competitiveness Package announced by the Federal government as part of its clean energy plan, as well as job gains in other sectors and areas and the effects of the renewable energy targets.⁵⁰

8.55 The Hunter region will be particularly affected as its main industries are mining, predominantly coal mining, and electricity generation. The Central West region is mainly prime agricultural land, with some coal mining. The Illawarra region is an agricultural, mining and steel making area. Its already difficult economic position will be further eroded by BlueScope Steel's recent announcement of redundancies at its Port Kembla facility.

8.56 When asked about the basis of the NSW modelling on 10 August 2011, Treasury officials agreed that it was based on a carbon price of \$23 per tonne, which was only used by Treasury in its modelling of the household impacts of the tax and that the same general equilibrium model was used by both parties.⁵¹

8.57 Commonwealth Treasury officers were asked to comment on this regional level analysis on 10 August 2011:

CHAIR: New South Wales Treasury also uses the MMRF-Green model to assess the regional impact of the carbon tax. Their modelling shows an absolute reduction of 18,500 jobs in the Hunter and 7,000 jobs lost through slower jobs growth in the Illawarra. Does Commonwealth Treasury have any evidence to question these findings?

Ms Quinn: We do find the Hunter Valley estimates very surprising. In the report Frontier identify that there is growth in that region in the order of 30

47 NSW Treasury, *Submission 81*, p. 1.

48 NSW Treasury, *Submission 81*, p. 3.

49 NSW Treasury, *Submission 81*, p. 1.

50 NSW Treasury, *Submission 81*, p. 10.

51 Ms Meghan Quinn, Macroeconomic Modelling Division, Macroeconomic Group, Department of Treasury, *Committee Hansard*, 10 August 2011, p. 11.

per cent, yet employment is falling over that period. We find that a very surprising result.

CHAIR: So you are not questioning the Illawarra results; you are just questioning the Hunter results?

Ms Quinn: We would question all of the results based on subregional information which assumes fixed shares from history and applies it to a dynamic forecast of the future. We think that does not provide balanced results and we do not consider them robust.⁵²

8.58 As discussed in chapter 6, however, Treasury has not published the impacts of the carbon tax on regional areas despite the Productivity Commission and ABARES providing such a breakdown in their analysis of policy reforms. Without this information from Treasury it is difficult to assess their claims about State government modelling which does provide such additional information.

8.59 Modelling conducted for NSW Treasury reaches different conclusions to the Commonwealth Treasury's modelling, as set out in the table below:

Table 8.3: Comparison of modelling by Commonwealth Treasury and New South Wales Treasury

	National GDP* at 2020	NSW GSP# at 2020
Commonwealth modelling	-0.33% per year	-0.32% per year
NSW modelling	-0.48% per year	-0.8% per year

* Gross Domestic Product and # Gross State Product

8.60 The NSW analysis puts the reduction in New South Wales' Gross State Product by 2030 at -1.53 per cent, the largest decrease of the mainland states.⁵³

8.61 NSW Treasury also questioned Commonwealth Treasury's analysis of the projected increase in wholesale electricity prices under the government's carbon tax plan. Commonwealth Treasury modelling predicted an average NSW wholesale electricity price increase of 38 per cent for the period 2013-17, but only a 10 per cent increase in average household electricity prices in that period.

8.62 Beginning with the average 38 per cent wholesale electricity price increase forecast by the Commonwealth Treasury, and making what it described as a

52 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, Macroeconomic Modelling Division, Macroeconomic Group, Department of Treasury, *Committee Hansard*, 10 August 2011, p. 11.

53 NSW Treasury, Submission 81, p. 8.

'reasonable' assumption that 'wholesale electricity prices for small consumers will rise approximately in proportion to average wholesale electricity prices', NSW Treasury concluded that the expected increase in final electricity prices would be 15 per cent.⁵⁴ The average effect on New South Wales households would be around \$240 to \$300 per year, up to \$500 for a high-usage household.

8.63 NSW Treasury also noted a discrepancy between analysis by the NSW Independent Pricing and Regulatory Tribunal (IPART) of the effect of the proposed CPRS price of \$26 per tonne on electricity prices in New South Wales and the Commonwealth Treasury's calculation, based on a carbon price of \$23 per tonne. IPART estimated that annual average household electricity bills would increase by 15-22 per cent in 2012-13, whereas the Commonwealth Treasury calculated the increase to be only 10 per cent.

8.64 This was put to Commonwealth Treasury officers by the committee on 10 August 2011:

CHAIR: They find that in New South Wales retail electricity price increases will be 15 per cent, not 10 per cent.

Ms Quinn: It is not clear that that number is from the Frontier Economics analysis. That is a combination of taking assumptions from an IPART report produced in relation to the Carbon Pollution Reduction Scheme and then using that analysis combined with some elements of the Frontier analysis. My understanding of the information in the New South Wales report is that this is a combination analysis. It does not actually report the Frontier increase in retail electricity prices.

CHAIR: So you do not think that New South Wales Treasury is better placed to understand the nuances of the New South Wales electricity generation and distribution sector?

Ms Quinn: I am not questioning New South Wales Treasury's ability to do analysis; I am questioning results from a set of information that does not take account of behavioural information over time.⁵⁵

8.65 IPART will be responsible for determining to what extent electricity providers in New South Wales can increase their prices. As such its analysis of the impact of a carbon price holds significant weight.

8.66 Of possibly the greatest significance in NSW Treasury's submission was its prediction of a net impact on operating balance of the state of either -\$369 million (based on low carbon price pass-through) or -\$396 million (based on full carbon price

54 NSW Treasury, Submission 81, p. 11.

55 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, Macroeconomic Modelling Division, Macroeconomic Group, Department of Treasury, *Committee Hansard*, 10 August 2011, p. 11.

pass-through). Its conclusion are illustrated in the following table from its submission:

Table 8.4: Fiscal Impact of the Commonwealth Government Carbon Tax policy on New South Wales⁵⁶

(\$ MILLIONS)				
	2011-12	2012-13	2013-14	2014-15
Revenue:	-45	-152	-113	-275
Generator dividends and tax equivalents	-45	-215	-150	-290
Other budget revenue:				
Payroll tax		-23	-32	-42
GST revenue		86	69	57
Recurrent expenditure:				
Low estimate (partial carbon price pass-through)		-94	-94	-94
High estimate (full carbon price pass-through)		-121	-121	-121
Direct electricity cost impacts:				
Low estimate (partial carbon price pass-through)		-44	-44	-44
High estimate (full carbon price pass-through)		-71	-71	-71
Other agency costs (indirect)		-50	-50	-50
Impact on each of Operating Balance and Net Lending:				
Low estimate	-45	-246	-207	-369
High estimate	-45	-273	-234	-396

NOTE:

While NSW has no legal liability to compensate Greenhouse Gas Reduction Scheme (GGAS) and Energy Savings Scheme (ESS) participants upon closure of these schemes, in the event they make compensation claims, these could amount to \$94m in 2012-13 on current estimates (up to \$80m for GGAS and up to \$14m for ESS).

8.67 The importance of this is that it is likely that the discrepancies highlighted by this analysis also apply to other states, not just New South Wales.

8.68 In its report, Frontier Economics states:

Even taking into account the [Commonwealth] Government's proposed shielding and compensation measures, this modelling exercise finds that the costs of introducing the Carbon Price Mechanism will be unevenly distributed across Australian regions. In particular, sectors and regions that rely on using large amounts of energy and produce large amounts of greenhouse gases will bear the majority of the burden of reducing Australia's greenhouse gas emissions. The effects on these sectors and regions are markedly more dramatic than the overall negative effect on the economy. These modelling results are based on the same assumptions adopted by Commonwealth Treasury to enable easy comparisons between studies.⁵⁷

⁵⁶ NSW Treasury, *Submission 81*, p. 3.

⁵⁷ Frontier Economics, *Carbon price modelling: A report prepared for the NSW government*, August 2011, p. 1.

...

The carbon price policy generates limited adverse macroeconomic effects in aggregate partly because the model assumes a high degree of macroeconomic flexibility.

...

This *aggregate* employment result [that the effects on employment are expected to be only modestly adverse] masks the underlying structural adjustment necessary for the economy to achieve this moderate result, which requires employment and other resources to flow freely between sectors and/or regions. To a degree, the creation of new jobs in some sectors and regions is outweighed by the reduction in jobs in other sectors and regions. However, the *change* in regional and sectoral results – which are not reflected in the Commonwealth Treasury's aggregated numbers – is also significant for assessing transitional costs. Transitional costs are ignored in both models. To a large degree these transitional adjustment costs will be borne by the States.⁵⁸

Victoria

8.69 On 20 September 2011, the Victorian Treasurer, Hon. Kim Wells MP, issued a media release concerning modelling the Victorian Government commissioned from Deloitte Access Economics (DAE) on the effects of the proposed carbon tax on the state.⁵⁹

8.70 That DAE modelling showed the following effect on the Victorian economy of the government's carbon tax:⁶⁰

58 Frontier Economics, *Carbon price modelling: A report prepared for the NSW government*, August 2011, p. 5.

59 Treasurer of Victoria, the Hon. Kim Wells MP, *Gillard Government carbon tax to devastate Victorian families and businesses*, Media Release, 20 September 2011, http://www.premier.vic.gov.au/images/stories/documents/mediareleases/2011/110920_Wells_-_Gillard_Govt_carbon_tax_to_devastate_Vic_families_and_businesses.pdf (accessed 22 September 2011).

60 Premier of Victoria, the Hon. Ted Baillieu MP, *Gillard Government carbon tax to choke Victorian Economy, new modelling shows*, Media Release, 18 August 2011, <http://www.premier.vic.gov.au/media-centre/media-releases/1732-gillard-government-carbon-tax-to-choke-victorian-economy-new-modelling-shows-.html> (accessed 18 August 2011).

Table 8.4: Deloitte Access Economics modelling of effect of carbon tax on Victoria⁶¹

	Med. Global Action	Core Policy	Difference	(%)
2015				
GSP, \$A million	345,118	338,978	-6,141	-1.78
GNI per capita, \$A/person	60,504	59,445	-1,059	-1.75
Employment, '000 FTE	3,011	2,976	-35	-1.16
Investment, \$A million	95,029	88,733	-6,296	-6.63
Emissions, Mt	135.7	109.7	-26	-19.11
2020				
GSP, \$A million	393,707	386,027	-7,680	-1.95
GNI per capita, \$A/person	67,729	66,716	-1,013	-1.50
Employment, '000 FTE	3,206	3,188	-18	-0.55
Investment, \$A million	112,599	107,588	-5,011	-4.45
Emissions, Mt	143.2	107.4	-36	-25.02
2030				
GSP, \$A million	505,965	492,803	-13,162	-2.60
GNI per capita, \$A/person	84,050	82,565	-1,485	-1.77
Employment, '000 FTE	3,603	3,584	-18	-0.51
Investment, \$A million	160,070	152,562	-7,507	-4.69
Emissions, Mt	166.1	112.6	-54	-32.20

Note: Dollar values are in Australian dollars at 2010 prices.

8.71 While DAE's modelling found that Victoria would not be the state hit hardest by the carbon tax, it would suffer considerably compared to the scenario without a carbon tax.⁶²

8.72 Mr Wells' Media Release stated that the modelling showed that:

- 'there will be 35,000 fewer jobs than would have been the case without a carbon tax;
- investment will be down almost \$6.3 billion, or 6.6 per cent;
- per capita income will be more than \$1,050 lower; and

61 Deloitte Access Economics report, at http://www.premier.vic.gov.au/images/stories/documents/mediareleases/2011/0_DAE_report.pdf, p. iii (accessed 22 September 2011).

62 Deloitte Access Economics report, at http://www.premier.vic.gov.au/images/stories/documents/mediareleases/2011/0_DAE_report.pdf, p. iii (accessed 22 September 2011).

- the Victorian State Budget is predicted to be almost \$660 million worse off⁶³.

Queensland

8.73 An analysis of the effect of the carbon tax on the Queensland economy was conducted by Queensland Treasury and released on 22 August 2011. It found that:

... (the) introduction of a carbon price is estimated to have a relatively small economic impact for Queensland over the next decade, although impacts will increase over the longer term to 2049-50. Fiscal and Genco value [the value of Queensland state owned electricity generators] impacts, however, will be material.⁶⁴

8.74 The Queensland Government found that the carbon tax would hit Queensland the hardest of any state, reducing gross state product by 3.5 per cent by 2050. The modelling found that there would be 12,000 fewer jobs in Queensland under the carbon tax by 2020, and 21,000 fewer jobs by 2050.⁶⁵ The net cost to the Queensland state budget was estimated at \$1.2 billion and the reduction in the net economic value of the State owned coal-fired electricity generation assets was estimated at an additional \$1.1 billion.

8.75 Queensland Treasury also commissioned analysis from Deloitte Access Economics. Deloitte's used a different model and made different assumptions to those made by the Commonwealth Treasury, in particular about:

- less flexible technological adjustment;
- slower labour market adjustment;
- greater impacts on the international competitiveness of Australian EITEs; and
- fewer international permits purchased in the shorter term (meaning more domestic abatement occurs, but at higher cost).

63 Treasurer of Victoria, the Hon. Kim Wells MP, *Gillard Government carbon tax to devastate Victorian families and businesses*, Media Release, 20 September 2011, http://www.premier.vic.gov.au/images/stories/documents/mediareleases/2011/110920_Wells_-_Gillard_Govt_carbon_tax_to_devastate_Vic_families_and_businesses.pdf (accessed 22 September 2011).

64 Queensland Treasury *Carbon Price Impacts for Queensland*, August 2011, p. 5, <http://www.treasury.qld.gov.au/knowledge/docs/carbon-price-impact-assessment/index.shtml> (accessed 24 August 2011).

65 Queensland Treasury *Carbon Price Impacts for Queensland*, August 2011, p. 19, <http://www.treasury.qld.gov.au/knowledge/docs/carbon-price-impact-assessment/index.shtml> (accessed 24 August 2011).

8.76 The DAE modelling shows that:

- '... short-term economic impacts are higher, however, over the long term, the results of the two models tend to converge';
- '... over the longer term, Queensland Treasury projects GSP will grow by an average of 2.8 per cent per year to 2049-50 with carbon pricing, while Deloitte Access Economics projects GSP growth of 2.9 per cent per year for the same period'.⁶⁶

Western Australia

8.77 On 21 August 2011 the Western Australian Department of Treasury released its *Preliminary Assessment of the Impact of the Proposed Carbon Tax on Western Australia*. It described the report as a 'preliminary assessment' as 'only limited information is available at the State level, and some details of the package are still to be finalised',⁶⁷ though a revised paper may be released when further information is available.

8.78 According to the report, the government's carbon tax will have the following effects on Western Australia:⁶⁸

- if a global market for emissions is established, which the report describes as 'very optimistic', an estimated \$56.9 billion in 2050 will be transferred from Australia to other countries;
- on the other hand, if no such market is created, then 'the domestic cost of emissions abatement could be much higher than the Commonwealth estimates';
- the carbon tax 'will have a more significant impact on certain industries and regions, such as Western Australia's LNG industry and the emerging magnetite iron ore industry' than other industries nationally;
- State Government-owned energy-sector companies will have a combined, direct tax liability under the carbon tax of between \$230 million and \$280 million per year;

66 Queensland Treasury *Carbon Price Impacts for Queensland*, August 2011, p.7, <http://www.treasury.qld.gov.au/knowledge/docs/carbon-price-impact-assessment/index.shtml> (accessed 24 August 2011).

67 Department of the Treasury, Western Australian Government, *Preliminary Assessment of the Impact of the Proposed Carbon Tax on Western Australia*, 21 August 2011, p. 1, http://www.treasury.wa.gov.au/cms/uploadedFiles/Treasury/Publications/Preliminary_Assessment_Impact_Proposed_Carbon_Tax_on_WA_August2011.pdf (accessed 22 August 2011).

68 Department of the Treasury, Western Australian Government, *Preliminary Assessment of the Impact of the Proposed Carbon Tax on Western Australia*, 21 August 2011, pp 3 - 4, http://www.treasury.wa.gov.au/cms/uploadedFiles/Treasury/Publications/Preliminary_Assessment_Impact_Proposed_Carbon_Tax_on_WA_August2011.pdf (accessed 22 August 2011).

- it will have a combined estimated cost impact of around \$50 million to \$60 million per year on other State Government operations, in areas such as water, public transport, health and education;
- the carbon tax will cause an expected increase in State Government tariffs, fees and charges to the 'representative' Western Australian household of \$144.11 in 2012-13, including 'a \$111.36 (or 7.0 per cent) increase in electricity charges, a \$19.50 (or 1.9 per cent) increase in public transport fares, and a \$13.25 (or 1.0 per cent) increase in water charges'; and
- the government compensation to West Australian households 'will not be sufficient to offset (that) impact'.

Council of Australian Governments

8.79 The carbon tax was raised by Premiers at the meeting of the Council of Australian Governments on 19 August 2011. Newspaper reports stated that the Premiers of New South Wales, Victoria and Western Australia demanded that the Prime Minister either not proceed with the tax or increase compensation to consumers and that they be provided with Treasury's modelling of the impact of the carbon tax at a state level. The Prime Minister declined to scrap the tax or provide the modelling, but it is reported that she did offer to allow Commonwealth Treasury officials to brief their state counterparts.⁶⁹

8.80 Reactions from State Premiers after the hearing included:

The Hon. Colin Barnett, Premier of West Australia: The Australian economy is fragile and the shock of a carbon tax could be very damaging ... If there is to be a carbon tax, I would prefer a lot slower, more gradual introduction than what's proposed so the economy can at least cope with it.⁷⁰

The Hon. Anna Bligh, Premier of Queensland: There's no doubt there are some parts of this package, particularly in relation to generation, that fall disproportionately on states that have a high level of state public ownership of coal-fired generators.⁷¹

The Hon. Barry O'Farrell, Premier of New South Wales: The carbon tax will have a significant negative impact on gross state product for NSW in the

69 Ross Peake, 'Leaders get a hearing, no concessions;', *Canberra Times*, 20 August 2011, p. 4; Matthew Franklin, Imre Salusinszky 'PM snubs states on carbon', *The Weekend Australian*, 20 August 2011, p. 6; Andrew Probyn and Andrew Tillett, 'PM digs in heels on carbon tax push', *Weekend West*, 20 August 2011, p. 18.

70 Andrew Probyn and Andrew Tillett, 'PM digs in heels on carbon tax push', *Weekend West*, 20 August 2011, p. 18.

71 Matthew Franklin, Imre Salusinszky 'PM snubs states on carbon', *The Weekend Australian*, 20 August 2011, p. 6.

short, medium and longer term. It will also have a significant impact on the state budget estimated to be at least \$867 million over four years. The Commonwealth has so far failed to address these impacts.⁷²

Delay in the implementation of the carbon tax

8.81 On 10 August 2011, Treasury officials told the committee that they had not been asked to provide advice on whether the government's climate change plan should be delayed given the current economic circumstances.⁷³

8.82 The following exchange then took place between Senator Cormann, Chair of the Committee and Treasury officials:

CHAIR: In the context of this line of questioning, the Australian dollar being where it is, is of course having an impact on our international competitiveness and with economic and financial market conditions where they are, has the government set itself a framework? Is there a set of scenarios in terms of the way the market and the economy could develop into the future under which there would be a reconsideration of the starting time line?

This is not a hypothetical question now. We have a circumstance now in which the Australian dollar is having an impact on our international competitiveness. As this committee travels around the country, manufacturing exporters around Australia are telling us how current international trade and conditions are very difficult for them and that they are already on the edge in terms of international competitiveness. Their concern is, of course, that the carbon tax and the pricing mechanism moving forward will put them, potentially, over that edge.

So my question is this: depending on how all of these parameters develop into the future, is there a scenario already established by the government in which it will reassess the desirability of the starting date of this carbon pricing package in the context of the sorts of tensions I have just mentioned?

...

Mr Heferen: As Dr Gruen said, the documentation—as far as I have seen—includes no discussion about a shift of starting date. It seems to me pretty clear that the intention is to have this commence when the documentation says it will. It is not qualified.⁷⁴

72 Andrew Clennell, '\$867m cost of new tax', *The Daily Telegraph*, 22 August 2011, p. 2.

73 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Dr David Gruen, Executive Director, Macroeconomic Group, Department of the Treasury *Committee Hansard*, 10 August 2011, p. 2.

74 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Mr Rob Heferen, Executive Director, Revenue Group, Department of the Treasury, *Committee Hansard*, 10 August 2011, pp 2 - 3.

8.83 Prof. John Quiggin, at his appearance before the committee on 10 August 2011, addressed the economic impact of the tax:

I endorse the Treasury's modelling and also the general thrust of the Treasury's report, which is that the impact of a carbon price will be very small relative to the growth we can expect in the general economy. Variations in household income will be very small relative to the kinds of variations that we expect from year to year from various factors, such as, for example, macroeconomic fluctuations.⁷⁵

8.84 In relation to its impact, taking into account other factors affecting the economy, he stated:

It seems pretty clear that the variations in the exchange rate, even those we have observed over the last week, are going to be more significant in terms of determining the competitiveness of Australian exports than is the carbon price. I would make the point that, if we expected exchange rates of \$1.10 against the US dollar to continue indefinitely, we would have a big problem.

...

My general point would be that the economy is a very volatile and changeable place and a lot of the discussion is predicated on the notion that there are no other variables that firms have to adjust to other than carbon prices.⁷⁶

8.85 The difficulty of introducing a carbon tax at this point in time was raised by Prof. Henry Ergas, also on 10 August:

The issue, to my mind, and the one I want to focus on, is not whether a carbon tax is a good idea or a poor idea in theory; it is whether it makes sense for Australia to implement such a tax, followed in short order by a move to an emissions trading scheme, at a time of great uncertainty both about the global economic outlook and about the extent and nature of the international abatement effort. These questions are especially acute for Australia because our prosperity is based on a resource endowment that is highly carbon intensive both in terms of minerals and in our agricultural sector. Moreover, and importantly, much of that carbon intensity is not amenable to technological quick fixes.⁷⁷

8.86 A similar point was made by the Australian Chamber of Commerce and Industry:

On the economy-wide front, as Treasury indicated this morning, it will be negative for the growth in real wages and also for productivity. It will

75 *Committee Hansard*, 10 August 2011, p. 53.

76 *Committee Hansard*, 10 August 2011, p. 54.

77 *Committee Hansard*, 10 August 2011, p. 60.

substantially add to the inflationary pressures on top of the price impact of other mitigation measures currently in place. The carbon tax has also played a significant role in derailing business and consumer confidence. In the context of heightened international economic uncertainty, now is the time to shore up our economic position; it is not the time to weaken our economy with the imposition of a productivity-sapping carbon tax that will be harmful to our competitiveness. In light of these circumstances, the government should recalibrate its approach and link action to confirmed international agreement.⁷⁸

8.87 Since the announcement by the government of its carbon tax plan on 10 July 2011:

- world share markets have fallen significantly and are marked by continuing uncertainty;
- that uncertainty is driven by the ongoing bleak economic picture in the United States and concerns about the capacity of the European Union to deal with its own economic crises;
- the International Monetary Fund's best-case scenario for Australia forecasts growth in 2011 will be a mere 1.8 per cent, after it previously had predicted growth of 3 per cent;⁷⁹
- the Reserve Bank has downgraded the forecast growth for 2011;
- more recently, it has noted that 'markets do seem to have reached a pessimistic assessment and this appears to be based mainly on the assumption that weakness in the US and Europe will flow through to Australia';⁸⁰ and
- consumer confidence continues at low-levels.

8.88 The committee is of the view that, in the light of these factors and their probable effect on the Budget and Australia's economy, the government should revise its commitment to proceed with its carbon tax.

The economic impact of higher electricity prices

8.89 A large part of the economic reform effort over the past 30 years has focused on improving the productivity and performance of the electricity, gas and water sectors. Some states began this process in the late 1980s, though efforts gathered pace with the Hilmer Review of 1993. Subsequently, reform of the electricity industry

78 Mr Greg Evans, Director, Economic and Industrial Policy, *Committee Hansard*, 10 August 2011, p. 69.

79 Peter Martin 'RBA and IMF agree: it's all gloomy', *The Age*, 21 September 2011, p. 5.

80 Ric Battellino, Deputy Governor, Reserve Bank of Australia, 'Will Australia catch a US cold?', Speech to the Euromoney Forum, 21 September 2011, <http://www.rba.gov.au/speeches/2011/sp-dg-210911.html> (accessed 22 September 2011).

(along with other infrastructure reforms) became a key element of National Competition Policy (NCP). Lower electricity prices, particularly for businesses, was one of the major benefits of the NCP reforms.

8.90 The Productivity Commission conducted a review of progress under National Competition Policy in 2005, stating in this review that:

... it is telling that in a number of areas targeted by NCP and related reforms there have been significant price reductions. For example in the electricity sector, notwithstanding variation across and within jurisdictions, average real prices Australia-wide have fallen by 19 per cent since the early 1990s.⁸¹

8.91 The Productivity Commission went on to explain the impact of the NCP reforms in more detail:

Although the effect of such NCP-related reforms on electricity prices is difficult to quantify, it is broadly accepted that their impact has been significant and that the reforms have stimulated other changes which have also had beneficial effects. In this context, Origin Energy stated that:

... the dramatic effect of competition on energy market outcomes since NCP was introduced, in terms of improved labour and capital productivity in generation, lower wholesale prices and substantial new investment in transmission and generation, is irrefutable. Other factors, such as technological change and general improvement in education and training across the economy, undoubtedly played a role in these outcomes, but to a far lesser extent. (sub. 89, p. 3)⁸²

8.92 It is notable that since this review was undertaken, the trend of decreasing prices has reversed. Since 2007 electricity prices for businesses have almost doubled, from 6 cents per kWh to 10 cents per kWh.⁸³

8.93 Nonetheless, the Productivity Commission see potential for further downward pressure on electricity prices from additional infrastructure reforms. In the Productivity Commission's view:

NRA electricity reform could potentially lower retail electricity prices by around an average of 2 per cent, from levels that would otherwise apply. If productivity improvements contributing to these changes could be

81 Productivity Commission, *Review of National Competition Policy Reforms*, 2005, Report No. 33, Canberra, p. xix.

82 Productivity Commission, *Review of National Competition Policy Reforms*, 2005, Report No. 33, Canberra, p. 62.

83 ABARES 2011, *Energy in Australia 2011*, produced for the Department of Resources, Energy and Tourism, p. 26 and ABARES 2009, *Energy in Australia 2009*, produced for the Department of Resources, Energy and Tourism, p. 29.

achieved, potential resource savings of up to \$270 million (2005-06 dollars) would be available.⁸⁴

8.94 According to the Productivity Commission these benefits would be the result of increased generator competition, transmission reform and demand-side management.

8.95 In contrast, according to Treasury, the carbon tax would increase electricity prices by 10 per cent, five times the potential reduction that the Productivity Commission identified in its assessment of the national reform agenda. Taking the Productivity Commission's estimates of the resource costs as a rough linear guide, these increased electricity prices alone could impose resource costs on the economy of at least \$1.3 billion.

Is the impact of the carbon tax modest?

8.96 In its update to the carbon tax modelling released on 21 September 2011, Treasury states that:

The costs of cutting pollution and transforming the Australian economy to clean energy sources through carbon pricing are modest.

8.97 The Treasury estimates that the carbon tax will reduce Australia's GDP by 2.8 per cent by 2050 than it would otherwise be.

8.98 In a submission to the Senate economics committee inquiry into the impact of supermarket price decisions on the dairy industry, the Treasury stated that the broader national competition policy reforms have resulted in substantial benefits to the Australian community and increased the economy's resilience to economic shocks.

8.99 Under that point, Treasury supports its conclusion by pointing to Productivity Commission analysis which shows that those reforms have 'served to permanently increase Australia's GDP by 2.5 per cent'.

8.100 It is not clear to the committee how a 2.8 per cent reduction in GDP could be described as modest but a 2.5 per cent increase in GDP could be described as substantial.

The potential for a carbon tax to undermine wider reforms

8.101 The reforms that Treasury rightly describe as having a substantial impact on the Australian economy over the last 30 years have not been easy to achieve. Although they delivered broad benefits for Australia, they imposed large transitional costs on certain towns and communities. Nonetheless, these reforms succeeded in part because they were broad-based. Although some Australians were worse off as a result

84 Productivity Commission, *Potential Benefits of the National Reform Agenda, Report to the Council of Australian Governments*, 2006, Canberra p. 59.

of some aspects of the changes, benefits from other aspects (such as lower electricity prices) accrued broadly to all.

8.102 These reforms were very traumatic for certain communities. Some of the hardest hit towns were in regional Australia, such as the electricity industry in the La Trobe, the textiles industry in Ballarat and Bendigo, the automotive industry in Geelong and Adelaide and the steel industry in Whyalla, the Illawarra and Newcastle.

8.103 Unfortunately, the carbon tax is set to have its biggest impact on some of these same communities in regional Australia (see chapter 6). There is only so much 'reform' that individual communities can take without there being a broader rejection of the policy setting in Canberra. Accordingly, the carbon tax may serve as a lightning rod for the justified complaints and frustrations of these communities.

8.104 Such a reaction can already be seen in the calls for renewed industry assistance to the steel and manufacturing industries. Large scale renewal of the industry assistance that once existed in Australia would be a retrograde step.

8.105 These communities are often at the frontline of the so-called "two-speed" or "patchwork" economy. After becoming more internationally competitive and resourceful from the opening up of the Australian economy, they are seeing hard won markets disappear due to a higher dollar and higher input costs, partly exacerbated by a mining boom. Imposing a carbon tax on top of these pressures threatens to kindle an already smouldering situation.

8.106 In the committee's view, the carbon tax has the potential to undermine the hard-fought acceptance of the economic reforms that have broadly benefited the Australian economy over the past 30 years. In the committee's view there is no corresponding benefit of the carbon tax which could justify taking such a risk.

The overall impact on the economy

8.107 Moreover, unlike previous reforms there is no broad economic bounty from a carbon tax that can be redistributed to offset the disproportionate costs imposed.

8.108 In total, under the government's own modelling, the carbon tax is likely to impose a \$1 trillion cost on the Australian economy. As economist, Prof. Henry Ergas explained to the committee:

Even with all those assumptions, and especially the assumption that the industrial countries will abate at a uniform price by 2016, the costs Treasury estimates are anything but trivial. Indeed, discounted at the Garnaut discount rate, they have a present value equal to \$1 trillion—that is, one year of Australia's GDP. That, as I said, relies on numerous assumptions, not least the assumption of global concerted action.

...

In the calculation that I set out, I used a discount rate—that is, the assumed time value of money, as it were, that is used in the Garnaut report. When

you do that, you get a GDP loss that is in the order of somewhere between \$890 billion and \$1.345 trillion for the core policy scenario. I rounded it to about \$1 trillion.⁸⁵

8.109 This \$1 trillion figure is about equal to the total output of the Australian economy in one year. Or to put it in other terms, the carbon tax will cost every Australian, \$40,000 on average.

8.110 This estimate is likely to be an underestimate given that Treasury's modelling relies on the assumption that other countries will act in concert with Australia to reduce emissions. While there is disagreement on whether or not other countries will act, no one could deny that it is at least likely that many other countries will either fail to take substantial action on climate change, or at least take action commensurate with that included in Treasury's modelling.

8.111 As an economy reliant on the use of cheap, carbon-intensive fossil fuels, unilateral action by Australia to reduce its emissions ahead of those of other countries is likely to be significantly more costly than the multilateral scenario. As the Productivity Commission stated in its submission to the Prime Ministerial Task Group on Emissions Trading in 2007:

Independent action by Australia to substantially reduce [greenhouse gases] GHG emissions, in itself, would deliver barely discernible climate benefits, but could be nationally very costly. Such action would therefore need to rest on other rationales.⁸⁶

8.112 The Productivity Commission goes on to explain this conclusion in more detail:

independent action would not, in itself, achieve discernible climate benefits because, despite its relatively high per capita emissions, Australia contributes only around 1.4 per cent of global GHG emissions. To put this in perspective, Australia's total annual GHG emissions constitute less than the United States and China each emit in a month;

Australia's high living standards derive in part from the largely efficient use of an abundance of low cost fossil fuels, reflected in relatively high per capita emission levels. As a result, substantially reducing GHG emissions would be costly for the Australian community, with costs borne mainly by consumers and the owners (and employees) of businesses that directly or indirectly rely on the intensive use of GHG producing energy sources.⁸⁷

8.113 The Productivity Commission concluded that:

85 Professor Henry Ergas, *Committee Hansard*, 10 August 2011, p. 16

86 Productivity Commission, *Productivity Commission Submission to the Prime Ministerial Task Group on Emissions Trading*, 2007 March, p. viii.

87 Productivity Commission, *Productivity Commission Submission to the Prime Ministerial Task Group on Emissions Trading*, March 2007, pp. 8-9.

Overall, the Commission's view is that it is unlikely that major new initiatives could be justified solely on the grounds that this would enhance Australia's standing as a good world citizen, or be influential in persuading other countries to take similar measures.⁸⁸

8.114 Furthermore, under the government's own modelling, even with its assumption of coordinated multilateral action, the carbon tax leads to lower economic output, lower wages and therefore lower revenue from income and other broad-based economy wide taxes. There is no "reform dividend" equivalent to that of previous reforms, which helped fund transitional assistance or competition payments to the states.

8.115 The government will be exposed to substantial "carbon revenue leakage" as the carbon tax changes into the Emissions Trading Scheme. During the carbon tax period, the government will be paid for all emission permits (except those issued under the Carbon Farming Initiative) as the scheme operates as a tax. However, under an emissions trading scheme, Australians will purchase substantial carbon credits from overseas, denying the Australian government the revenue from carbon credits. This will leave the government with decreasing revenue with which to compensate households and businesses for costs which will continue to increase.

Committee comment

8.116 In the committee's view, the government's carbon tax policy provides no cogent rationale for imposing a \$1 trillion cost on the Australian economy. In fact, this may well be a conservative estimate of its impact on the economy, as Treasury's modelling relies on the assumption that other countries will act in concert with Australia to reduce emissions, an assumption that remains unsupported and is highly unlikely.

8.117 The committee believes that the evidence it has received shows that the cost to the Australian people in lower wages, restricted job opportunities, heightened risk to the fiscal budgetary position, higher electricity prices and a less competitive business sector is simply not worth the illusory climate benefits that the government claims the carbon tax will present.

8.118 In addition, the carbon tax will impose disproportionate costs on sections of the Australian economy that have already faced pressures throughout Australia's economic reform period and continue to face similar pressures from the higher costs and exchange rate created by the mining boom. Instead of being an example of economic reform as the government maintains, the carbon tax is a threat to those reforms, as it gives new potency to claims for industry assistance and economic rent-seeking.

88 Productivity Commission, *Productivity Commission Submission to the Prime Ministerial Task Group on Emissions Trading*, March 2007, p. 31.

8.119 The committee believes that the government's carbon tax would be an extremely inefficient form of taxation. On one view it will impact economic activity to a greater degree than any other tax currently being imposed.

8.120 This inefficiency is made more obvious given that it is based on two inter-related but highly questionable assumptions – firstly, that a credible international agreement on emissions reduction will be achieved relatively soon and, secondly, that some mechanism will be established to allow for the trade of abatement internationally.

8.121 The evidence taken by the committee shows that, unlike previous major economic reforms, there is no broad bounty from a carbon tax that can be redistributed to offset disproportionate costs imposed upon just a few sectors of the economy and regions. Indeed the opposite is the case.

8.122 In addition to its \$1 trillion impost on the economy referred to above, the carbon tax will not be revenue neutral, as originally proposed. When all the currently known measures entailed in its implementation are considered it has a combined deficit of \$4,449.8 million. This does not include the cost of the contracts for closure program.

8.123 As a result, in the committee's view, the government should not proceed with a carbon tax. The current global economic environment is a particularly fraught one for an Australian government to be imposing new costs on Australian businesses. As such, it is likely to disadvantage Australian the ability of businesses to compete in global markets.

8.124 The committee recommends again (as per Recommendation 3, below) that if the Parliament believes that it should proceed with the carbon tax that it does so once current global economic circumstances have improved and there is a legally binding global agreement on tackling climate change.

8.125 Nonetheless, if the government persists with imposing a carbon tax, the committee considers that the government should instruct the Productivity Commission to undertake a cost-benefit analysis of the proposed carbon tax before it is implemented.

Recommendation 3

8.126 The committee recommends that if the Parliament believes that it should proceed with the carbon tax, that it does so once current global economic circumstances have improved and there is a legally binding global agreement on tackling climate change.

Chapter 9

The transport industry and the carbon tax

Introduction

9.1 Under existing taxation arrangements excise is imposed on fuel. In the case of households and small commercial vehicles, the full amount of excise is borne by the consumer. Excise on commercial use of fuel is lessened through the fuel tax credit system. The Goods and Services Tax is imposed in addition to excise on fuel.

9.2 On announcing the Clean Energy Future Reform package, the government detailed that an effective carbon tax would be imposed on certain fuel usage but that measures would be introduced to ensure that households, on-road business use of light vehicles and the agricultural, forestry and fishery industries would not incur any carbon tax.¹

9.3 An effective carbon tax will be introduced by the government through the legislation currently before the Parliament by changing the existing fuel tax credit system. Through its legislation the government intends to reduce the credits which can be claimed by relevant fuel users to reflect the amount of the carbon tax.²

9.4 The carbon tax on fuel will impact directly about 60,000 businesses from day one, 1 July 2012, rising to around 200,000 businesses once the government implements its effective carbon tax on heavy vehicle transport from 1 July 2014.

The road transport industry

On-road fuel usage in the transport industry

9.5 In announcing the introduction of a carbon price for the transport industry, the government made a commitment that the on-road use of fuel by heavy vehicles would not be subject to the tax until 1 July 2014. The delay in the introduction of the carbon tax has however done little to alleviate the concerns of this industry.

9.6 As detailed in Chapter 6, when appearing before the committee, Inverell Freighters explained that regardless of the two year reprieve there is little they can do to modify their activities and behaviours to further reduce their carbon emissions.³

1 Australian Government, *Clean Energy Future – Fact sheet 16*, p. 43.

2 Australian Government, *Clean Energy Future – Fact sheet 16*, p. 43.

3 Mr Keri Brown, Managing Director, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 1.

They suggest that there is real concern that the added costs that result from the imposition of the tax in 2014 may be the straw that breaks the camel's back.⁴

9.7 The Transport Workers Union of Australia (TWU) raised these same concerns when they appeared before the committee:

...we say that there are many tens of thousands of owner-drivers and employees across the country who will be directly affected with the carbon tax. We estimate the decrease on the diesel fuel rebate, which will in effect be the carbon tax in another form in 2014, will cost a driver \$150–\$200 a week. That is directly off their bottom line and directly off what we consider income after tax.⁵

9.8 In their submission to the committee, the TWU detailed their concerns that the imposition of the tax through a reduction in the diesel fuel rebate would put additional pressure on an already squeezed price taking industry:

[T]his is an industry that is already described as 'highly sweated' and 'highly pressured.' Drivers will have two options: accept the decrease, or work longer hours and take more dangerous trips, and report after report confirms that that is what happens, because clients will not pay.

...

Quite clearly the 2.5 per cent margin is a high margin in many transport operations. Many of these reports point out that many operators are effectively working in a negative margin for parts of the year. The consequence of the carbon tax and this payment will put truck operators, truck drivers and many fleet operators quite clearly over the edge as they will not be able to recoup the costs without safe rates.⁶

9.9 Mr Tony Sheldon, the National Secretary of the TWU, explained that the imposition of a carbon tax was unlike other imposts which the industry has continuously absorbed over the years, as it involves a 'massive hit' of \$150–\$200 per week.⁷ Mr Sheldon had grave concerns that this will have dire consequences for the industry:

In the trucking industry there has been a history of incapacity, which is in all of these reports, of being able to pass costs on and what happens is that the truck drivers and trucks get sweated and when they get sweated that is

4 Mr Keri Brown, Inverell Freighters, *Committee Hansard*, 3 August 2011, p. 1.

5 Mr Tony Sheldon, National Secretary, Transport Workers Union of Australia, *Committee Hansard*, 22 July 2011, p. 22.

6 Mr Tony Sheldon, Transport Workers Union of Australia, *Committee Hansard*, 22 July 2011, p. 24.

7 Mr Tony Sheldon, Transport Workers Union of Australia, *Committee Hansard*, 22 July 2011, p. 25.

what increases the death rates. A big hit like \$150–\$200 a week is a death tax.⁸

Committee comment

9.10 The committee acknowledges that over the years the heavy vehicle on-road transport industry has taken action to reduce their emissions through the adoption of better engine technology.

9.11 The committee considers that the introduction of a carbon tax by a reduction in the fuel tax credit in 2014 will result in the loss of jobs and businesses and that the impact of this will be felt particularly in regional areas given their reliance on road transport.

Off-road fuel usage in the transport industry

9.12 As a result of the operation of the existing fuel tax credit system, some businesses effectively pay no excise on the fuel they use off-road.⁹ The government's Clean Energy Future Package, however, proposes changes to this regime which will impose an effective carbon tax on businesses' liquid and gaseous fuel emissions.¹⁰ In announcing these changes the government has given an undertaking that fuel tax credits will not be reduced for the agriculture, forestry or fishing industry.¹¹ Although the government has given this undertaking concern among these industries remains.

9.13 When appearing before the committee, the Victorian Farmers' Federation (VFF) explained that although the farming industry is relieved that the carbon tax proposal exempts on-farm emissions, there is 'no doubt' that farmers will have to bear the extra costs of power and energy sources:

This means that costs of farm supplies such as power, fertiliser, chemicals and fuel will go up as the full effect of the carbon tax is passed on to farmers. On the output side, manufacturing processes and the costs of transporting livestock and bulk commodities like grain will increase quite significantly as the price of carbon drives costs forward.¹²

9.14 Evidence provided to the committee, in fact, suggests that there is some uncertainty as to how the introduction of an effective carbon tax through its interaction with the existing fuel tax credit system will affect off-road fuel users.

8 Mr Tony Sheldon, Transport Workers Union of Australia, *Committee Hansard*, 22 July 2011, p. 25.

9 Australian Government, *Clean energy future – Fact sheet 16*, p. 43.

10 Australian Government, *Clean energy future – Fact sheet 16*, p. 43.

11 Australian Government, *Clean energy future – Fact sheet 16*, p. 43.

12 Mr Peter Tuohey, Vice President and Chair, Farm Business and Regional Development Committee, Victorian Farmers' Federation, *Committee Hansard*, 1 September 2011, p. 20.

Although the VFF's understanding is that their off-road fuel use won't be affected,¹³ the Secretary of the Department of Climate Change and Energy Efficiency, when appearing before the committee, explained the position as follows:

CHAIR: I am looking at the exposure draft, page 5, 43(8), 'working out the amount of carbon reduction'. This clause effectively imposes a carbon price on fuel through a reduction in the fuel tax credit, does it not?

Mr Comley: That is correct.

CHAIR: Essentially, it contains a formula. The credit for taxable fuel or the fuel tax rebate is reduced by a formula that is the quantity of fuel times the carbon price times the carbon emissions rate. Doesn't this mean that recipients of the fuel tax rebate are paying a carbon price from the word go by the wording of your own legislation?

Mr Comley: It certainly means that they are having a reduction in their credit linked to the carbon price, yes.

CHAIR: From day 1, as of 1 July 2012 under your exposure draft?

Mr Comley: Yes, that is correct.

CHAIR: I thought that that was correct, which is not entirely consistent with the proposition that fuel has been excluded from the carbon pricing package that has been released by the government.

Mr Comley: The documents make it clear that there is coverage of the transport sector. In fact, if I were to turn to both the policy tables and the full clean energy document, it is clear that transport is covered in some part. There are exclusions for small on-road vehicles under 4.5 tonnes. But it is entirely consistent with the documentation that has been provided.

Senator WILLIAMS: So are you telling us that the 6.21c a litre on the rebate for transport of more than 4.5 tonnes tare weight will start on 1 July 2012?

Mr Comley: No—sorry Senator. For the large vehicle issue, there is a government commitment to start on 1 July 2014. The fuels being referred to here are a fuels related effectively to off-road use.

CHAIR: And of course the expected revenue which the government intends to include, in terms of transport fuels, into the carbon pricing regime from 2014-15 has been included in the costings of the package, too, has it not?

Mr Comley: It is part of the forward estimates, yes.¹⁴

13 Mr Peter Tuohey, Victorian Farmers' Federation, *Committee Hansard*, 1 September 2011, p. 21.

14 Senator Mathias Cormann, Chair, senate Select Committee on the Scrutiny of New Taxes and Mr Blair Comley, Secretary, Department of Climate Change and Energy Efficiency, *Committee Hansard*, 10 August 2011, p. 42.

9.15 It appears therefore that although the government has given an undertaking to exclude off-road fuel usage in the forestry, farming and fishing industries,¹⁵ other off-road fuel use, such as that used by mines, will be captured by the changes and will incur an effective carbon price from 1 July 2012. As a result, many more than 500 big emitters will be caught paying the government's proposed carbon tax. Indeed, in a recent Australian National Audit Office Audit Report, the Tax Office identified that in the 2009–10 financial year there were 192 195 registered claimants in the fuel tax credit system (up from 146 997 in the 2006–07 financial year).¹⁶

9.16 Therefore, despite undertakings from the government to exclude the on-road transport, forestry, farming and fishing industries from changes to the fuel tax credit system until 1 July 2014, a large number of businesses will still be affected by the reductions that take effect from 1 July 2012.

9.17 Consistent with Tax Office data provided to the Auditor General, at the time of writing this report 59 079 businesses would incur an effective carbon tax through a reduction in their fuel tax credits from 1 July 2012. That number will increase further to about 200 000 businesses once the government imposes the carbon tax on heavy vehicles from 1 July 2014.

Table 9.1.: Fuel Scheme Claims Data (by industry)¹⁷

Industry	2006-07		2007-08		2008-09		2009-10	
	No. claims	Claims \$m	No. claims	Claims \$m	No. claims	Claims \$m	No. claims	Claims \$m
Mining	1060	1390	1282	1439	1539	1689	1518	1700
Transport, postal and warehousing	33 067	1090	38229	1165	40612	1164	39008	1118
Agriculture, forestry and fishing	79 553	533	90 289	618	94 920	629	94 108	641
Professional, scientific and technical services	1047	288	1343	240	1796	300	1834	342
Manufacturing	3684	268	4452	271	5310	268	5346	268

15 In their supplementary submission to the inquiry the Commonwealth Fisheries Association welcomed the government's commitment to exempt direct emissions of the fishing sector from any carbon price mechanism. Source: Commonwealth Fisheries Association, *Supplementary Submission 89*, p. 1.

16 Australian National Audit Office, *Audit Report No. 49 2010–11, Fuel Tax Credits Scheme, Australian Taxation Office*, pp 73 – 74.

17 Australian National Audit Office, *Audit Report No. 49 2010–11, Fuel Tax Credits Scheme, Australian Taxation Office*, pp 73 – 74.

Financial and insurance services	586	212	714	219	866	212	902	217
Construction	11 415	164	14 909	215	21 211	275	22 423	277
Electricity, gas and waste services	1461	150	1809	141	2093	110	2136	106
Public administration and safety	606	96	749	112	786	137	804	120
Rental, hiring and real estate services	2212	26	2756	36	3507	43	3709	43
Retail trade	2981	19	3531	22	4164	24	4234	24
Other services	1881	15	2376	17	2980	18	3132	19
Unknown/other	461	14	629	8	687	8	742	6
Administrative and support services	1141	13	1493	13	2983	16	3293	17
Accommodation and food services	681	10	865	11	1298	11	1330	10
Arts and recreation services	469	10	604	19	945	18	1008	24
Information media and telecommunications	90	3	111	15	139	6	131	4
Education and training	361	2	465	4	713	4	775	5
Health care and social assistance	307	2	375	2	436	2	457	2
Total	146 997	4379	171 688	4648	192 339	5016	192 195	5016

9.18 In announcing the changes to the fuel tax credit scheme the government has stated that the fuel tax credit changes for petrol and diesel will be determined according to their level of emissions, given that different fuels emit different amounts of carbon when burnt.¹⁸ The fuel tax credit changes for liquid fossil fuels, other than petrol and diesel, will be based on the diesel emission rate and changes for gaseous fuels will reflect the effective carbon price based on their specific emission rates.¹⁹

18 Australian Government, *Clean energy future – Fact sheet 16*.

19 Australian Government, *Clean energy future – Fact sheet 16*.

The government has announced that there will be a three year transitional period involved in effecting these changes:

Table 9.2.: Fuel tax credit reductions per fuel type over the three year transitional assistance period²⁰

Year	Petrol	Diesel and other liquid fuels*	LPG*	LNG & CNG#
2012-13	5.52	6.21	3.68	6.67
2013-14	5.796	6.521	3.864	7.004
2014-15	6.096	6.858	4.064	7.366

* cents per litre and # cents per kilogram

Committee comment

9.19 Contrary to government assertions that the carbon tax will only be paid by the top 500 emitters, the changes to the fuel tax credit system will introduce an effective carbon tax for approximately 60 000 fuel users from 1 July 2012.

The air transport industry

A carbon tax on aviation fuel

9.20 As aviation fuel is not subject to the existing fuel tax credit system, domestic aviation fuel excise will be increased annually from 1 July 2012 by an amount equivalent to the carbon tax.²¹ The method for determining the increase in the aviation fuel excise will change from 1 July 2015 when it will be increased on a six monthly basis, based on the average carbon price over the previous six months.²²

Table 9.3: Carbon price impact on aviation fuel, cents per litre²³

	Carbon price (\$/tonne CO ₂ -e)	Aviation kerosene	Aviation Gasoline
2012-13	23.00	5.98	5.06
2013-14	24.15	6.279	5.313
2014-15	25.4	6.604	5.588

9.21 Throughout the course of the inquiry, the committee received evidence from the aviation industry as to how the increase in fuel excise – an effective carbon tax,

20 Australian Government, *Clean energy future – Fact sheet 16*.

21 Australian Government, *Clean energy future – Fact sheet 16*.

22 Australian Government, *Clean energy future – Fact sheet 16*.

23 Australian Government, *Clean energy future – Fact sheet 16*, p. 44.

will impact their operations. The industry is concerned that the impact of the carbon tax on the airline industry will not lead to the change in behaviour that the government is seeking but will instead threaten jobs and damage the industry's competitiveness and viability.

9.22 When appearing before the committee, Regional Express Holdings Ltd, (REX), which operates regional airline services, voiced concern that the carbon tax initiative may challenge their long term financial viability, putting in jeopardy the service they provide to rural and regional areas of Australia:

We have got very few substantial things we can do that will reduce our carbon emissions beyond what we are already doing and have been doing. It is in the interests of all airlines to reduce their fuel bill and whether or not you add another 6c per litre or not it is still a significant cost. There has always been a very big driver to reduce the sheer amount of fuel that we burn. Short of actually reducing activity, there is not a lot we can do... [I]f the objective is for us to reduce carbon emissions and therefore reduce activity, regional communities that do not necessarily have any other way of achieving that kind of service will be without an air service. We do not feel we can simply pass on the fuel excise without affecting the demand and therefore without affecting our profitability and potentially leaving some communities without a vital regional air service.²⁴

9.23 REX is a regional airline formed in 2002 out of the collapse of the Ansett Group; it operates over 33 routes to 29 regional destinations and in the 2010-11 financial year carried approximately 1.2 million passengers.²⁵ REX employs approximately 1,000 people, many of whom are based in regional centres.²⁶

9.24 The REX witnesses identified that passing on any cost to their passengers will have an impact on demand and any such downturn may affect profitability leading them to withdraw from some routes:

Mr Hine: We will have little option but to pass the cost on to our passengers. As I said, the biggest concern to us is that, given the nine years we have of operating, plus Warwick and I have been with the two combined companies for 16 years—Warwick for 19—the data tells us that we cannot simply add \$2, \$3 or \$4 and it have no effect on demand. So the fear to us is it will reduce our profitability and therefore on some of the marginal routes we already have the end result could be us having to pull out of those communities.

...

24 Mr Christopher Hine, Regional Express Holdings Ltd, *Committee Hansard*, 22 July 2011, p. 13.

25 Mr Christopher Hine, Regional Express Holdings Ltd, *Committee Hansard*, 22 July 2011, p. 13.

26 Mr Warrick Lodge, General Manager, Network Strategy and Sales, Regional Express Holdings Ltd, *Committee Hansard*, 22 July 2011, p. 18.

Mr Hine: We previously identified seven ports/routes that we want to make known as being marginal ones for us. They are out of Sydney: Bathurst, Taree and Grafton. And out of Melbourne: King Island, Merimbula and Griffith.

Mr Lodge: Primarily all those routes achieve less than 30,000 passengers per year. I guess it is the thin passenger volumes that make it quite difficult to provide a frequent service and achieve the required economies of scale to service those thin and marginal routes.²⁷

9.25 REX are of the view that as use of their service is largely for non-discretionary travel, if they are forced to withdraw from regional routes the environmental outcome will be worse, as customers will have no choice but to rely on more emission intensive cars to reach their destinations:

...we believe that more than 80 per cent of passengers travelling across our network do so because they need to. It is actually essential travel. That is one of our arguments in terms of the public service and the public provision we are providing through these regional services where there are people in many of the regional [communities] that we service that are travelling to the city to undertake specialised medical treatment, business people travelling to and from Sydney, Melbourne and Adelaide. We are linking regional Australia with the city, and that is where the services we provide...are vastly different to the major carriers...²⁸

9.26 The concern that the introduction of a carbon tax would jeopardise the ongoing viability of regional airlines to provide these essential services was also voiced by the Regional Aviation Association of Australia (RAAA):

The CT [carbon tax] will mean higher costs for regional air services and may further discourage people to move from the crowded major cities to opportunities in the regional centres.

The CT will only apply to domestic carriers. International operators will not be charged the tax on fuel thus forcing an unequal burden on regional operators. In Europe all international flights are subject to a carbon penalty through the European ETS.

Regional aviation will experience a 'quadruple whammy' on 1 July 2012. This will have a considerable dampening effect on the sector and may threaten the viability of some routes.²⁹

9.27 The 'quadruple whammy' that the RAAA is referring to is:

- the introduction of the carbon tax through the increased fuel excise;

27 Mr Christopher Hine and Mr Warrick Lodge, Regional Express Holdings Ltd, *Committee Hansard*, 22 July 2011, p. 13.

28 Mr Warrick Lodge, Regional Express Holdings Pty Ltd, *Committee Hansard*, 22 July 2011, p. 19.

29 Regional Aviation Association of Australia, *Submission 76*, p. 3.

- the removal of the successful enroute rebate scheme;
- new security screening measures that will result in increases in operating costs at regional ports; and
- ongoing fuel excise increases that do not apply to international airlines, Airservices Australia and capital city airports.³⁰

9.28 The RAAA was established in 1980 to protect, represent and promote the interests of regional airlines and regional aviation in Australia; jointly, the Association's members turnover more than \$1 billion per annum, and carry more than two million passengers and 23 million kilograms of freight.³¹

9.29 The RAAA takes the view that the additional \$11 million per annum that will be added to the fuel costs of its members will not only create barriers to entry but will threaten the viability of some carriers and force all operators to review their current route structures.³² They suggest that the government needs to consider the cumulative effect of the proposed policies on their industry.³³

9.30 Even QANTAS Group, a large aviation industry participant, with ability to access capital, acknowledges that broader policy implementation and reform would enhance the ability of the aviation industry to transition to a low carbon economy.³⁴ Arguably they do not face the same challenges as regional airlines such as REX and the members of the RAAA. However, they may be impacted as international aviation fuel use is not subject to fuel excise and will, therefore, not be subject to an effective carbon price.³⁵

9.31 In addition to regional airlines, concerns have been voiced by businesses like Superair Australia. Superair Australia, a small regional aerial agricultural specialist based in Armidale and employing 20 people, is also concerned that the increased operating costs that will result from higher fuel prices will damage their profitability:

As a direct result of increased fuel pricing, increased fertilizer costs and increase in costs over and above our direct competitors, Superair's turnover will ultimately decrease and therefore lead to loss of jobs within the company and the industry as a whole.³⁶

9.32 Superair Australia is critical of the government's view that the introduction of a carbon tax will not be borne by the agricultural industry:

30 Regional Aviation Association of Australia, *Submission 76*, p. 3.

31 Regional Aviation Association of Australia, *Submission 76*, p. 1.

32 Regional Aviation Association of Australia, *Submission 76*, p. 3.

33 Regional Aviation Association of Australia, *Submission 76*, p. 3.

34 QANTAS Airways Limited, *Submission 52*, p. 5.

35 Australian Government, *Clean energy future – Fact sheet 16*, p. 44.

36 Superair Australia, *Submission 69*, p. 2.

My main focus is the effect the Carbon Tax will have on the major component of our business being our Agricultural and Forestry operations. Specifically the expected 5.588 cents per litre increase in Avgas and the 6.604 Jet A1 turbine fuel increase. This directly will add some \$30,000 to \$40,000 to our costs of aviation fuel per year just for our company alone...

Our business is solely dependent on agriculture... For the government to come out openly and say that agriculture is exempt again I find hard to find the facts in that statement. Because Superair operates in a very high capital cost industry with low margins, we will have no choice but to pass onto our clients the graziers or the forestry industry the increase in fuel costs that we will incur because of the direct burden of the carbon tax. If this makes agriculture exempt from the carbon tax in any way shape or form I would be happy for someone to enlighten me as I may be missing an important point that the government is aware of and I am not!

...

Another issue that highlights how inequitable this tax is to our company is that our direct competitor the Fertilizer Ground spreading industry utilizing trucks is exempt from the tax under the agricultural exemption. This gives our direct competitors a market advantage.³⁷

9.33 The airlines also explained to the committee that they have been taking steps to reduce their emissions for some time and that with or without a carbon tax they have put efforts into reducing their fuel burn³⁸ and that beyond what they are already doing, cannot do much to further reduce their carbon emissions:

Short of actually reducing activity, there is not a lot we can do. There are no modified engines available and there is very little chance that anyone, particularly a regional operator, is going to invest the dollars required to produce an alternative engine for a Saab 340 for example... The other concern to us is that, if the objective is for us to reduce carbon emissions and therefore reduce activity, regional communities that do not necessarily have any other way of achieving that kind of service will be without an air service.³⁹

CQ Rescue

9.34 Like previous witnesses, CQ Rescue stated that the increased operating costs they will incur as a result of the additional impost of a carbon tax are a cause of concern. CQ Rescue operates an aero medical and search and rescue facility covering

37 Superair Australia, *Submission 69*, pp 1–2.

38 Mr Christopher Hine, Regional Express Holdings Ltd, *Committee Hansard*, 22 July 2011, p. 15.

39 Mr Christopher Hine, Regional Express Holdings Ltd, *Committee Hansard*, 22 July 2011, p. 13.

an area within approximately a 300 nautical mile radius from Mackay.⁴⁰ The cost of providing the service, which is made available free of charge to all Australian residents, is approximately \$5 million per annum.⁴¹ CQ Rescue is funded partly by government grant (40 per cent) and the remaining 60 per cent by donation and corporate sponsorship.⁴²

9.35 In addition to an increase in their operating costs of approximately \$20,000, CQ Rescue raised the impact of the carbon tax on their corporate sponsors as a source of some uncertainty:

Dr Bastable: I guess it is difficult to predict what sort of effect the carbon legislation is going to have on a lot of our sponsors. Our sponsors are largely coal producers or concerned with the mining industry—BMA, Peabody, Thiess, Leighton—but I think in the main the fuel would be the consideration. I am not sure what the price of aviation fuel per litre is today but, given it is 341,000 litres, it will be significant. I am not even sure what the price impact will be. It is somewhere between 3½c and 10c—is that right?

Senator BOSWELL: 19c in three or four years.

Dr Bastable: My CEO told me it was about \$20,000. I am not sure what price per litre he based that on.⁴³

9.36 CQ Rescue, however, is confident that their service will not be curtailed as a result of the impact of a carbon tax and the increased operating costs they will incur.

Committee comment

9.37 In announcing their Clean Energy Package the government has consistently claimed that the scope of a carbon tax would be restricted to Australia's top 500 emitters – this claim has been used to mislead the Australian public. Throughout its inquiry this committee has uncovered the truth, that the real scope of the government's carbon tax plan will be more than 60 000 businesses. This impact will be felt through the changes to the fuel tax credit scheme that the government is seeking to introduce from 1 July 2012. These changes again hit small businesses, often in regional Australia, where the challenges of transitioning to large scale government policy initiatives are often more deeply felt.

40 Dr Peter Bastable, Chairman, CQ Rescue Board, CQ Rescue, *Committee Hansard*, 5 August 2011, p. 52.

41 Dr Peter Bastable, Chairman, CQ Rescue Board, CQ Rescue, *Committee Hansard*, 5 August 2011, p. 52.

42 Dr Peter Bastable, Chairman, CQ Rescue Board, CQ Rescue, *Committee Hansard*, 5 August 2011, p. 52.

43 Dr Peter Bastable, Chairman, CQ Rescue Board, CQ Rescue, *Committee Hansard*, 5 August 2011, p. 52.

9.38 The committee thanks the large number of small businesses in rural and regional Australia who participated in its inquiry either through making submissions or appearing before the committee. The input of these often forgotten stakeholders further highlighted the inadequacy of government modelling of the impacts of the proposed carbon tax on regional Australia.

Chapter 10

The carbon tax modelling: deficiencies

Introduction

10.1 This chapter of the report outlines the processes that have led to the development of the Treasury modelling that has underpinned the government's carbon tax. The chapter also outlines and discusses the shortcomings of the Treasury modelling.

The carbon tax modelling

10.2 On 10 July 2011, the Treasurer, the Hon. Wayne Swan MP, and the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, released the *Strong growth low pollution: modelling a carbon price* (SGLP) report. The report contained the assumptions that underpin the modelling of the carbon tax.

10.3 An update to the SGLP report was released on 21 September 2011 which revised the policy parameters of the national and sectoral economic modelling in the SGLP report.

10.4 The update presents two additional scenarios: one that reflects the *Clean Energy Future* package endorsed by the Multi-Party Committee on Climate Change (MPCCC), with a starting carbon price of \$23/t CO₂-e instead of the \$20/t CO₂-e modelled in the SGLP report and one that also includes additional government policy measures.

10.5 According to the Treasury, the purpose of the modelling has been to:
... inform policy design and public discussion about carbon pricing. Treasury has modelled a range of scenarios which explore different environmental targets and design features of a carbon pricing scheme. The modelling provides important insights into the economic impacts of carbon pricing at global, national, sectoral and household levels.¹

10.6 Notably, however, the SGLP report does not include modelling results for the important case where Australia imposes a carbon tax but the rest of the world does not move to introduce carbon pricing.

1 <http://www.treasury.gov.au/carbonpricemodelling/content/default.asp>
(accessed on 26 September 2011).

Process issues and the development of the carbon tax

Release of the carbon tax modelling for public scrutiny

10.7 The Treasury has not released all of its modelling or the results of the modelling for public scrutiny. The Treasury has stated that this would amount to 'thousands and thousands of pages of modelling'.² Nor has it released the data inputs and specifications it used to modify the models it purchased from outside sources. A failure to do so was also criticised during the Senate Select Committee hearing into the Rudd Government's Carbon Pollution Reduction Scheme.³

Peer review and scrutiny by other experts

10.8 During the questioning of the Treasury officers about the modelling the issue of whether the model had been peer reviewed arose:

CHAIR: ... Did Treasury conduct any public workshops on its modelling involving other modelling experts and allowing them to critique Treasury's approach?

Ms Quinn: Are you talking about the analysis in the most recent or are you talking in the broad at different times?

CHAIR: The most recent.

Ms Quinn: In terms of the update that we published this week, no we did not have any workshops around that update.⁴

10.9 While the Treasury did not conduct peer review of its most recent analysis, the issue of whether such scrutiny had applied to earlier modelling was also covered:

CHAIR: What about the 2011 main modelling document that was released a month or two earlier?

Ms Quinn: We have conducted different types of consultation exercises on different parts of the modelling exercise. It depends a little bit on which component you are interested in. For example, it is very important to discuss what the technology options are in the electricity generation sector going forward. There is a great deal of interest in those assumptions from the electricity generation sector and very different views in the industry. So a consultation exercise was undertaken on that component of the modelling. There are other parts that we also went to experts and asked them for their input.

2 Dr David Gruen, Executive Director, Macroeconomic Group Domestic, the Treasury, *Committee Hansard*, 23 September 2011, p. 7.

3 Report of the Select Committee on Climate Policy, June 2009, pp 36 - 37.

4 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes, and Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 23 September 2011, p. 7.

In terms of the analysis on the MMRF model, which you have raised this morning, we engaged the Centre of Policy Studies to provide us with a review of the analysis that we have done to check the technical components of the modelling were to their standard.

CHAIR: How did you determine which aspects of the modelling you would go through a process where you would have like public workshops or opportunity for other modelling experts to critique the Treasury approach?

Ms Quinn: It partly depended upon the availability of experts outside—the types of people who were interested. It is based on our experience to the modelling in 2008, where we also undertook consultations before and after the modelling was released. So between 2008 and 2011 there was quite a lot of engagement between Treasury and experts on the various elements of the modelling. So based on all of that information we also went back to people where we thought it would be particularly useful to get input.⁵

10.10 As the Treasury is not the only organisation that undertakes modelling exercises for the government, a point of comparison was highlighted between the transparency surrounding the carbon tax and the work of the Productivity Commission. The Commission regularly undertakes comprehensive modelling activities for the government. One example is its review of the economic transformation package, the National Reform Agenda.

10.11 The exchange below highlights the different approaches to transparency:

CHAIR: I refer you to your answers to question 15 of the questions you took on notice on 10 August. It is in relation to the release of modelling results. In that answer you state:

'The set of information that has already been provided is more comprehensive than comparable reports by other organisations'

...

How can that be true, when the Productivity Commission has actually made the Monash modelling so files associated with its National Reform Agenda public? Is the Productivity Commission not a comparable organisation? Or is their modelling not comparable, even though it used the same modelling you did?

...

Ms Quinn: It comes down to what you mean by 'open and transparent' in the sense that we had provided at that stage, as this says, 200 or 300 pages of the modelling et cetera.

CHAIR: Sorry. I can tell you explicitly what I mean by 'open and transparent', and that is that the Productivity Commission has actually made

5 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes, and Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 23 September 2011, p. 7.

the Monash modelling files associated with its National Reform Agenda work publicly available, whereas Treasury has not.

Ms Quinn: The Monash University model is available in the public domain through Monash University.

CHAIR: But you have made adjustments to it for the carbon tax modelling.

Ms Quinn: That information has been incorporated into the MMRF model that is available. Models evolve through time. They change as people evaluate things, as they add in information et cetera. We worked with the Centre of Policy Studies. Just to make it absolutely clear, the 2008 exercise was published by the Centre of Policy Studies. Monash University professor Philip Adams published that analysis with Treasury. It was not Treasury using a model without the model builder being happy and content and actively reporting that analysis. Since that time, the changes to the structure of the model that we may well have undertaken have been incorporated into the MMRF model and are available to other people in the Australian community.⁶

Public access to the carbon tax modelling

10.12 At a public hearing on 10 August 2011, one month after the release of the Clean Energy Future Package, the following question was asked of the Treasury officers at a public hearing:

Senator BOSWELL: Will Treasury provide independent experts access to the modelling so that they can understand all assumptions and parameters?

Ms Quinn: As was the case previously, Treasury has provided comprehensive documentation, including 35 pages of assumptions, as part of the report that is on the web page. This is the most comprehensive documentation on modelling related to carbon pricing that is available in Australia. We have provided detail on the assumptions that are important for determining the results. Others are free to undertake modelling with their assumptions as they have done.⁷

10.13 The questioning continued:

Ms Quinn: In providing information to the public domain, we have provided a comprehensive amount of information. Treasury does not own these models, so it is not possible for us to hand over someone else's model. These models are publicly available. They are purchased and available from organisations within Australia. There is nothing preventing people picking up these models and doing modelling if they have a desire to do so.

6 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes, and Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 23 September 2011, pp 8 – 9.

7 Senator Ron Boswell, participating member of the Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 10 August 2011, p. 29.

Senator BOSWELL: So, if Professor Ergas were to go with a cheque in his hand and say, 'I want the modelling and I am prepared to pay for it,' it would be available to him? Is that what you are saying?

Ms Quinn: He would be able to pay for the models used by Treasury and, yes, he would be able to receive those models.

Senator BOSWELL: Comprehensive models?

Ms Quinn: Yes, he would be able to obtain them from the providers of those models.⁸

10.14 When told that he could purchase the models used by the Treasury from their respective sources, Professor Ergas explained to the Inquiry why this was not as straightforward or beneficial an exercise as it seemed:

... what you can purchase, Senator, with respect, is two models. You can purchase a model called MMRF and a model called GTEM. But what they have done is they have taken hulls of MMRF and GTEM and they have then specified those. They have converted them into, as it were, a set of fully worked out equations and into that inputted very significant quantities of data. That then yields them these two fully specified models and then one must have means, though it is not clear what those means are, of rendering those models consistent with each other—in other words, synchronising the results. Without access to the actual model, including the datasets and the specifications, essentially what you are saying is that a person who wanted access to a Shakespeare sonnet is perfectly entitled to himself use the alphabet and an English dictionary. You are absolutely right, but there is a very long way and a lot of duplication of effort, and a huge amount of reinventing the wheel, absolutely pointlessly, that would be involved in taking that approach.⁹

10.15 Professor Ergas explained why access to the complete model and all the data is important to any scrutiny of the Treasury's reports:

(The SGLP Report) relies on numerous assumptions, not less the assumption of concerted global action.

In saying this, let me emphasise that it is absolutely fair for Treasury to have made those and other assumptions. That is in the nature of modelling. But it is also fair for there to be a full opportunity to assess the implications of varying those assumptions.¹⁰

8 Senator Ron Boswell, participating member of the Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 10 August 2011, p. 30.

9 Professor Henry Ergas, Professor of Infrastructure Economics, University of Wollongong, *Committee Hansard*, 10 August 2011, p. 65.

10 Professor Henry Ergas, Professor of Infrastructure Economics, University of Wollongong, *Committee Hansard*, 10 August 2011, p. 61.

10.16 Further to the public hearing on 10 August 2011, the issue was again raised at a public hearing on 23 September 2011. Once again, the evidence highlighted ongoing frustration by stakeholders about a lack of access to the modelling:

Dr Gruen: Senator, if I might try and clarify, it is not up to us to object or not object. It is not up to us. We do not lay down the law about what other institutions can or cannot do.

Senator BOSWELL: Dr Gruen, that is helpful to know, but when people have turned up to purchase the model from ABARES, ABARES officials have said that, because Treasury has made modifications to the model, any decision to make the model available is a decision for Treasury. So what I am asking you is: you have no objection?

Dr Gruen: In respect of that statement that you have read out, our understanding is that it is not a decision for us, so I do not think that statement is correct.

Senator BOSWELL: All right. So you have no objection?

Dr Gruen: Sorry, I am not trying to be difficult here, but we do not go around having objections or not having objections.

Senator BOSWELL: Well, you are, you see, because ABARES are saying you have adjusted the model and therefore you will not let us sell it. So you are saying ABARES are wrong?

Dr Gruen: I am saying that the evidence, as you have read it out, does not make sense to us. We are not making those statements to ABARES.

Senator BOSWELL: So when people go down to ABARES—

Dr Gruen: It is up to ABARES and the government.

Senator BOSWELL: and ABARES say, 'Treasury won't let us sell'—we have it on the Hansard now—we can put it on the counter and say, 'Treasury has no objections.'

Dr Gruen: You can put it on the counter and say that it is a decision for ABARES and the government.¹¹

10.17 Based on this evidence it is the Committee's view that the Treasury officials provided incorrect advice to the Committee. Specifically, there was a categorical assertion that GTEM was publicly available. In fact, it was not. Moreover, Treasury's further replies on this issue were not helpful. What is being sought, is the release of the models used by the Treasury, along with all the data, specifications and assumptions that the Treasury put into those models, so that an appropriately qualified expert could examine the modelling of the carbon tax undertaken by the Treasury. The Treasury officials appear to be referring to the capacity of persons to purchase a licence to use the software for those models, without the data, assumptions and

11 Senator Ron Boswell, participating member of the Senate Select Committee on the Scrutiny of New Taxes and Dr David Gruen, Macroeconomic Group, the Treasury, *Committee Hansard*, 10 August 2011, p. 30.

specifications by the Treasury officials. But even on those limited terms, the reality, quite contrary to the evidence Treasury provided, is that the GTEM model on which it relied is not available to third parties. As a result, other experts are not in a position to seek to replicate and appropriately test, Treasury's modelling.

10.18 The failure by the Treasury to release the modelling for public scrutiny was also raised by the Centre for International Economics, in relation to an assessment of the international abatement assumptions made by the Treasury:

This very high reliance on the purchase of international abatement is a crucial feature of the Treasury analysis and flows through to all aspects of the results. That is, the industry results and the price results in particular depend upon particular outcomes in the international market for abatement.

It is natural, therefore, to ask how sensitive the results are to changes in cost of abatement in different countries (as well as to the changing composition of policies in different countries) and to any restrictions in abatement trade between countries.

Without access to the original model, it is difficult to undertake this analysis.¹²

Release of the update carbon tax modelling

10.19 As outlined above, the Treasury released some of its modelling on 10 July 2011. On 21 September 2011, the Treasury released the publication, *Strong Growth, Low Pollution: Modelling a Carbon Price Update* (SGLP Update). The release of the updated modelling was announced by a joint press release issued at 9:18am by the Deputy Prime Minister and Treasurer, the Hon. Wayne Swan MP, and the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP.¹³

10.20 The SGLP Update was released at the same time (9:18 am¹⁴) as the first Joint Select Committee on Australia's Clean Energy Future Legislation public hearing. The timing of this release was raised at the Joint Select public hearing:

CHAIR (Ms AE Burke): I declare open this public hearing of the Joint Select Committee on Australia's Clean Energy Future Legislation inquiry into the Clean Energy Bill 2011 and related bills. ... We have received a written submission to this inquiry from you. As you have all indicated you do not wish to make opening statements we will go to questions. I will kick

12 Centre for International Economics, *Notes on 'Strong growth, low pollution' – Modelling and related issues*, September 2011, p. 13.

13 Joint Media release, the Deputy Prime Minister and Treasurer, the Hon, Wayne Swan MP, and the Minister for Climate Change and Energy Efficiency, the Hon, Greg Combet AM MP, 'Carbon price update', issued on 21 September 2011 at 9:18am by email from subscribe@treasury.gov.au.

14 Joint Select Committee on Australia's Clean Energy Future legislation, *Committee Hansard*, 21 September 2011, p. 1.

off the questioning as the Treasury modelling has been released this morning.

Senator CORMANN: That is very convenient timing.

CHAIR: It is beyond my control.

Senator CORMANN: People who were suspicious would think the government had something to hide. It is hardly open and transparent government to release it this late.

CHAIR: Now is your opportunity.

Senator CORMANN: We do not have a copy. Where is it?

CHAIR: We are not proceeding with this inquiry under this—

Senator CORMANN: Have you got a copy?

CHAIR: No, I have not. All I have seen—

Senator CORMANN: How are you going to ask questions about modelling when you have not seen it?

CHAIR: I have not got a copy. That is why—

Senator CORMANN: That is ridiculous.

CHAIR: All I have seen is the press release.

Senator CORMANN: The government is treating this committee with contempt.

CHAIR: Fine, then we will not deal with the modelling if you do not wish to.

Senator CORMANN: It is absolutely ridiculous.

CHAIR: I was going to ask them to give us a quick briefing on it. All I have seen is the press release from the Treasurer this morning.

Senator CORMANN: The Treasurer is treating us with contempt.

CHAIR: No.

Unidentified speaker: That was minutes ago, Madam Chair.

CHAIR: It was literally minutes ago. It came through minutes ago so I was going to see—

Senator CORMANN: That is disgraceful.

CHAIR: Right, I am not going to allow this committee to descend into a farce at your convenience at the outset.

Senator CORMANN: It is the government that is making it a farce.

CHAIR: Order! I have authority as chair to exclude people from the hearing and as members know I have no harm in doing it in my role as deputy chair in the House. So, if you want to proceed in that manner we will not have a hearing. If you do not want to deal with the modelling we can wait and we will recall Treasury at a later stage. I will therefore hand to Senator Milne to kick off with relevant questions.

Mr TONY SMITH: You confirmed at the beginning of this public hearing that the updated Treasury modelling, which was promised to be released with the legislation, has been released minutes before the opening of this hearing. That has just occurred now and copies are just coming into the room now. It is quite reasonable that members of the committee regard that as an utter contempt of the committee and, also, disrespectful to you, Madam Chair. You are the chair of this committee and you have said just now that you—

CHAIR: The member for Casey will well know that this is an inquiry into the bills before us today. You have the bills—they have been there. This is additional information that goes with the bills. I will—

Senator BIRMINGHAM: Which was promised to be released with the bills.

CHAIR: We are not in question time. We are not in the various chambers. We are in a public hearing and we will treat it with the respect it deserves. In that matter—

Senator BIRMINGHAM: It would be nice if the government treated this committee with the respect it deserves.

CHAIR: Senator Birmingham, if you let me finish. In that matter I am going to treat you with the respect you deserve and therefore we will not deal with the modelling today. We will recall the Treasury officials on Monday. I think that is reasonable.

Senator BIRMINGHAM: Just what questions are we meant to ask?

CHAIR: I thought I was assisting everybody. My apologies!¹⁵

10.21 The Treasury did appear on Monday, 26 September 2011 at a public hearing conducted by the Joint Committee.

Committee Comment

10.22 The Committee is concerned by the almost complete lack of transparency about the Treasury modelling.

10.23 The modelling relies on a suite of models, and especially (for its assessment of the economy-wide effects) on two models – the Monash Multi-Regional Forecasting (MMRF) model and the Global Trade and Environment (GTEM) model – along with a data set developed by the Treasury. While the MMRF model is available commercially, the GTEM model, developed by the then Australian Bureau of Agricultural and Resource Economics and Sciences, is not, though Treasury categorically claimed it was in hearings of this Committee.

15 Senator Anna Burke, Chair Joint Select Committee on Australia's Clean Energy Future Legislation, Senator Mathias Cormann, Senator Simon Birmingham and the Hon. Tony Smith MP, *Proof Committee Hansard*, 21 September 2011, pp 1 -3 .

10.24 As a result, and given that Treasury's data set has not been released publicly, it is impossible for third parties to replicate, much less stress test, Treasury's results. Those results would therefore not be accepted for publication in any scientific journal, and are no more than claims Treasury makes.

10.25 This issue is made more acute by the lack of clarity on key technical issues. Thus, it is by no means clear (and is nowhere explained in the SGLP report) how the Treasury has inter-worked the GTEM and MMRF models. There is, with respect to these models, a 'double endogeneity' problem: each model's output is an input to the other. There is an almost complete lack of clarity in Treasury's documentation about how it has addressed that problem.

10.26 Moreover, there are issues with interpreting the differences between the models. For example, as discussed in greater detail below, the MMRF model imposes a cost on the diffusion of induced innovations (the output of the Marginal Abatement Cost (MAC) curves); in the GTEM model, the standard specification does not.¹⁶ However, the law of one price (which states that absent trade barriers and other trade costs, prices for identical goods will be equalised internationally) means that it is not possible, in a conventional trade model, for (say) the price of a scrubber for reducing emissions at cement plants to differ as between countries. But this must happen in Treasury's model given the difference in assumptions about the MAC curves. This suggests the modelling strategy may be conceptually flawed, but the Treasury has neither explained why that is not the case nor disclosed the information needed to assess it.

10.27 Similar issues of how the models inter-work, and what decisions have been made as to how the output of the models is combined, affect the modelling of the price impacts of the carbon tax. In essence, the price modelling on which the government's compensation package relies is based on the Price Revenue Incidence Simulation Model (PRISMOD), which is basically a calculator of the direct and indirect impacts of assumed input price changes. These results are likely to differ substantially from the price changes estimated in the general equilibrium modelling, which is used to assess the effects of the carbon tax on real incomes.

10.28 However, the Treasury nowhere discloses the price changes from the general equilibrium modelling, nor explains its implications for real incomes (that is, real living standards, which are the result of changes in prices and wages), nor reconciles the various sets of results.

10.29 Treasury seems to believe this is acceptable, given that a version of PRISMOD was used to model the GST. The Committee believes this is incorrect, for two reasons. First, general equilibrium estimates of the impact of the GST were available, as well as those from input-output models such as PRISMOD. Second, and

16 Professor Henry Ergas, "How marginal was my abatement?", at <http://catallaxyfiles.com/2011/07/page/2/> (accessed 4 October 2011)

even more important, the GST was expected to increase real incomes, as tax reform allowed the economy to become more productive. In contrast, even in Treasury's modelling, it is clear the carbon tax is expected to lower wages.

10.30 As a result, assessing whether adequate compensation is being provided requires understanding both the changes in prices and incomes. There is therefore no sensible reason why the full outputs of the modelling, in terms of prices and incomes, have not been released.

Regulatory Impact Statement process

10.31 As part of the legislative process, legislation that is introduced into the Parliament is required to go through a Regulatory Impact Statement (RIS) process. The government's *Best Practice Regulation Handbook* (June 2010 edition) establishes the process and requirements to be followed.

10.32 As stated by the former Minister for Finance and Deregulation, the Hon. Lindsay Tanner MP:

Well designed regulation has a vital role to play in overcoming some of the problems that lead to inefficient or inequitable market outcomes. However, 'well designed' is an important qualifier - poorly designed regulation may not achieve its objectives, and can impose costs on businesses and the community more broadly.¹⁷

10.33 The handbook is there to provide the impetus for agencies and governments to improve the quality of regulation and its impact on the Australian community and economy. Given the importance of RIS process, it is unsurprising that this matter was investigated by the committee.

10.34 At its hearing on 16 September 2011, the committee asked about the nature of the Department of Climate Change and Energy Efficiency's compliance with the RIS process:

Senator FIFIELD: I ask a few questions about the regulatory impact statement on the clean energy legislation. With such significant legislation, as a matter of course, these statements must be done. Has the department commissioned external work to estimate the compliance costs on businesses of the carbon tax?

Dr Kennedy: Well, as you know there was a regulatory impact statement completed and published as part of the introduction of the legislation. I will just hand over to Mr White, who may know a bit more detail about that.

Senator FIFIELD: Thank you.

Mr White: Senator, in preparing the regulatory impact statement, the department did not commission external device for the regulatory impact

17 <http://www.finance.gov.au/obpr/proposal/handbook/foreword.html>
(accessed 26 September 2011).

statement that was prepared this year. What was done was that two quite significant pieces of external advice were commissioned in relation to the Carbon Pollution Reduction Scheme proposal of a couple of years ago. And because the underlying mechanics of the schemes are similar, in terms of the reporting requirements, permit surrender requirements, so for business systems those reports we used as a basis for assessing their compliance costs and the resident was prepared this year.

Senator FIFIELD: Okay, so there has not been new analysis done.

Mr White: The department did not commission a new external analysis.

Senator FIFIELD: Okay. So you are relying on that 2008 work, fundamentally?

Mr White: Yes, updated by the department's own internal analysis.¹⁸

10.35 It is surprising that such a significant change to the economy through this carbon tax initiative was not subject to greater scrutiny as part of the RIS process:

Senator FIFIELD: Okay, I will just come back to the role of the department itself in undertaking the regulatory impact statement. The handbook also goes on to say that:

Where possible, quantify the impacts. At a minimum your analysis should attempt to quantify all highly significant costs and benefits to be assessed as adequate, and (the RIS) must have a degree of detail and depth of analysis that is commensurate with the magnitude of the problem and the size of the potential impact of the proposal.

Now, it is hard to (think) of an economic change, a policy change, a legislative change which would have a magnitude of impact greater than what is being proposed with the clean energy package. This is exactly the sort of scenario that the Department of Finance and Deregulation envisages detail and depth being gone into with a greater magnitude than in other situations. Given that requirement, it does strike me as suboptimal, to say the least, that it is 2008 work for a different legislative package and a different scheme which is fundamentally being relied upon to determine the compliance costs and the effects on business.

Dr Kennedy: As Mr White said, much of the mechanics of this scheme are similar to the mechanics in the former CPRS. Hence we took the judgment that we could rely on those significant early external assessments, and the OBPR was comfortable with that position.¹⁹

18 Senator Mitch Fifield and Dr Steven Kennedy, Deputy Secretary, Department of Climate Change and Energy Efficiency and Mr James White, Assistant Secretary, Department of Climate Change and Energy Efficiency, *Committee Hansard*, 16 September 2011, pp 12 – 13.

19 Senator Mitch Fifield and Dr Steven Kennedy, Deputy Secretary, Department of Climate Change and Energy Efficiency, *Committee Hansard*, 16 September 2011, p. 14.

10.36 While the RIS does not appear to have been substantially updated since the Carbon Pollution Reduction Scheme (CPRS), the carbon tax will introduce new compliance costs for business. As mentioned earlier, the RIS process is intended to contribute to the development of best possible legislation:

Senator FIFIELD: As part of the process, has the Department of Climate Change and Energy Efficiency undertaken a quantitative cost-benefit analysis?

Dr Kennedy: Of the carbon price emissions trading scheme?

Senator FIFIELD: Yes. And taking into account compliance costs as part of that.

Dr Kennedy: I suppose for this policy the Treasury modelling is the key modelling, particularly for the cost side. What this means for variations in growth for what it might be otherwise—

Senator FIFIELD: Let us come back to compliance costs. The Ernst & Young work in 2008 looked at compliance costs. Has that work been done again in relation to this package?

Dr Kennedy: As Mr White said earlier, the two earlier studies formed the basis of the compliance aspect of our assessment of this scheme.

Senator FIFIELD: So the answer is no, then. There has not been freshly commissioned work to look at the compliance costs for this scheme?

Dr Kennedy: I think Mr White has answered that question, yes.

Senator FIFIELD: The Treasury modelling does not cover compliance costs for business, does it?

Dr Kennedy: The costs and benefits of an emissions trading scheme? What the Treasury modelling covers at the macroeconomic level is the cost to the economy of imposing a carbon price. What it does not cover are the benefits that flow from mitigating climate change. So in a sense it is not a full cost-benefit analysis—it actually only focuses on the economic costs and the transitional adjustment from introducing a carbon price.

Senator FIFIELD: Under the requirements of the Office of Best Practice Regulation, when undertaking regulatory impact statements is it not the obligation of the department of climate change, in this case, rather than Treasury, to undertake that cost-benefit analysis?

Dr Kennedy: We are not talking about compliance now, we are talking about the entire scheme and all the costs and benefits of the scheme.

Senator FIFIELD: Yes.

Dr Kennedy: I think it is important that the whole of government looks at the policy. Treasury is the place that has the resources to most carefully examine and model the costs and transitions that come with carbon pricing. The benefit side of mitigating emissions has been looked at by the 2008 Garnaut review, not the most recent one, and Treasury was deeply involved in that exercise. It is really the only exercise in Australia that has tried to quantify the benefits of mitigating climate change or avoiding dangerous climate change. Some of those benefits are difficult to estimate but as a

policy, from a modelling perspective, the extent of the Treasury modelling and the Garnaut style modelling is probably the most extensive and long modelling that has ever been done on any policy. They were looking at costs and benefits over 100 years.

Senator FIFIELD: Back to compliance costs, did the Office of Best Practice Regulation advise you that a fresh analysis of compliance costs was not required for the RIS?

Dr Kennedy: I will ask Mr White to comment on that.

Mr White: We discussed the question of compliance costs analysis with the Office of Best Practice Regulation and they were satisfied with the approach we took.

Senator FIFIELD: Would the secretary of the department have to sign off that he was confident that all requirements had been met?

Dr Kennedy: The secretary or his delegate. I think in this case it may have been me.

Senator FIFIELD: It may have been you?

Dr Kennedy: I sign off on a lot of things, Senator. I am pretty sure I signed off on that one.

Senator FIFIELD: Okay, it is a pretty significant thing to sign off on. Thank you.²⁰

10.37 Leaving aside the surprising point that Dr Kennedy was uncertain whether or not he had signed off on so important a document, it is notable that in doing so he was unaware that the Treasury modelling explicitly does not include the compliance costs being discussed. As that document notes:²¹

The models do not capture transaction costs in reducing emissions, such as through regulating emission trading schemes. In the real world, implementing and monitoring emission markets has transaction costs ...²²

Concerns about the Treasury modelling

10.38 The Treasury's modelling of the government's carbon tax, has been widely criticised as highly optimistic and based on implausible assumptions:

The base case is meant to reflect a plausible reality, and I do not think anybody would imagine that the rest of the world is going to put a carbon price in place. To me, this is more an attempt to manipulate the outcomes of

20 Senator Mitch Fifield and Dr Steven Kennedy, Deputy Secretary, Department of Climate Change and Energy Efficiency and Mr James White, Assistant Secretary, Department of Climate Change and Energy Efficiency, *Proof Committee Hansard*, 16 September 2011, p. 14.

21 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 28

22 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 28

the model than to try to openly and transparently understand the effects of a carbon tax.²³

10.39 The Committee has identified a number of concerns about the Treasury modelling which has been publicly released:

1. Treasury has not performed a cost-benefit analysis of the effect of imposing a carbon tax;
2. it has not properly modelled the macroeconomic effects of the carbon tax;
3. unrealistic assumptions by the Treasury that other nations will cut their carbon emissions in line with commitments made under the Cancun, Copenhagen and Kyoto protocols and that credible and seamless international trading of permits will be available on anything like the scale envisaged by Treasury;
4. what flows from the assumption that the economy will maintain full employment, rather than the assumption itself; and
5. the decision not to model results at a regional level.

10.40 The fifth issue is addressed in Chapter 6 of the report.

Cost-benefit analysis

10.41 It is of great concern that Treasury has not performed a cost-benefit analysis of the impact of imposing a carbon tax on Australia. It is inevitable that any change of the size of the carbon tax will have effects on the economy as a whole.

10.42 In evidence cited above, Senator Fifield questioned the Department of Climate Change and Energy Efficiency officers on the conduct of a cost-benefit analysis. They admitted that no such analysis was conducted, but asserted that that responsibility rested with the Treasury. Regardless, the important thing is that it was not done.

10.43 Other chapters of this Report address evidence provided to the Inquiry about the knock-on effects to the economy of the government's carbon tax, particularly in regional areas. For example, there is evidence that it will affect jobs, not only in energy and mining, where the effects will be direct, but also in regions where power generation or mining are the major employers. There has been evidence that the increase in petrol prices, when it comes in, will affect how small businesses operate, as well as prices for towns reliant on road transport to bring in food and groceries.

23 Mr Daniel Price, Managing Director, Frontier Economics, *Committee Hansard*, 1 September 2011, p. 50.

Committee Comment

10.44 The Committee believes that Treasury's failure to perform the required cost-benefit analysis on the whole economy means that its modelling does not provide a full picture of the effect of the carbon tax.

Macroeconomic modelling

10.45 The models used by the Treasury 'do not capture transaction costs in reducing emissions, such as through regulating emission trading schemes'.²⁴ Nor has the Treasury captured the transition costs that would be imposed on the economy by restructuring as a result of the carbon tax. The modelling 'assumes labour and capital adjust perfectly across industries, and it does not capture as many of the transition costs as would be experienced in the real world'.²⁵ Further, the modelling treats all household assistance as a lump sum payment for simplicity. This means it does not reflect the distortions likely to be caused by the actual form in which that assistance is provided.

10.46 Therefore, it must be concluded that the modelling is likely to significantly underestimate the overall costs of the scheme.

10.47 In considering the macroeconomic costs of the carbon tax, Treasury has modelled the impact of the tax, in 'percentage deviation from baseline terms'. It has shown the results of the modelling for Gross National Income per person, the capital stock, real wages and Gross Domestic Product in Charts 5.10 to 5.13.²⁶ Those charts show the percentage cost of the scheme moving at a more or less steady pace, year after year, all the way to 2050.

Committee Comment

10.48 The Committee believes that the Treasury modelling is inadequate in its modelling of the macroeconomic costs of the carbon tax, with the risk that these costs are significantly underestimated. The modelling it has conducted relies on a chain of assumptions, many of them unrealistic. That said, it is true that all economic modelling relies on assumptions — indeed, that is the difference between a model and a life-size reproduction. However, any serious work tests the implications of varying at least those assumptions to which the outputs are likely to be most sensitive. In Treasury's report, on the other hand, there is little sensitivity testing, even compared to the work that was done for the CPRS.

24 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 16.

25 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 15.

26 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, pp 86 - 89.

10.49 While Treasury's modelling has been presented as reflecting the economic impact of the government's package of measures, the Committee feels it is far from doing so.

10.50 To begin with, as set out in Chapter 8 dealing with the budget impacts of the government's carbon tax, Treasury's modelling does not cover the costs of the additional, unfunded, outlays associated with the package. As these will require a long run increase in taxes, they would normally be costed on a basis that includes the distortions induced by taxes, as required by the government's guidelines for cost-benefit appraisal. However, Treasury simply assumes the measures are budget-neutral, when they are not.

10.51 Moreover, Treasury's modelling does not reflect the economic costs of the compensation package. As indicated, it assumes households receive that compensation in the form of lump-sum payments, which (by definition) have no effect on decisions to work or save. However, in reality, the tax changes introduced by the government involve an increase in marginal tax rates for many tax earners. Additionally, the tax interaction effects between the carbon tax and the income tax for those high income earners who do not receive compensation amount to an increase in effective marginal tax rates. As a result, they will distort the economy, causing added economic losses. Treasury's modelling ignores those effects altogether.

10.52 As for Treasury's modelling of the electricity sector, it ignores the proposed shut down of generating facilities, and the economic consequences of the condition that the government has said will be imposed on generators accessing compensation payments. The effect of those conditions will be to distort, and hence further increase the cost, of electricity supply.

10.53 Nor does Treasury model the economic costs of the subsidies to renewables and other industries that will be provided by the Clean Energy Finance Corporation.

10.54 Finally, Treasury's modelling ignores the fact that the government has locked in compensation to households in what amounts to dollar terms by building that compensation into the tax and benefit schedules. However, future carbon prices, and hence revenues to government, are uncertain, which means that fiscal risk has increased. That fiscal risk has a cost to the community but that cost if not acknowledged, much less modelled, in Treasury's analysis.

Unrealistic assumptions about an international carbon trading scheme

10.55 On 10 August 2011, the Treasury officials were asked about its assumption in relation to international action on climate change. The Inquiry was told:

The analysis we have undertaken relating to international action on climate change indicates that countries that have made pledges at either Cancun or Copenhagen conventions through the UNFCCC process implement policies to achieve those pledges. For example, the United States has pledged to reduce its emissions by 17 per cent of its 1990 levels by 2020, and that is the

assumption that we have modelled in the 550 parts per million scenario. Where countries have identified a range in their pledges, we have taken the low-end pledges over the period to 2020. They are the international action assumptions that are embodied in the modelling.

For the more ambitious international action, we have assumed that countries have to achieve the highest of their pledges between now and 2016 and then countries have to take greater action than is currently on the table, because there is a mismatch between the pledges that are currently on the table and the stated agreement or aim of parties to the UNFCCC of achieving a two degrees or less warming of the world. There is a bit of an inconsistency at the moment between those two pledges.²⁷

10.56 The main criticism of this approach is that there is little evidence that the international community will, in fact, live up to all its promises on carbon reduction. It should be stressed that this does not mean no action will be taken to reduce carbon emissions. Rather, the assumption can be seen as at best overly optimistic, if not naive and unrealistic.

10.57 From Australia's point of view, there are significant doubts that some of our most important trading partners and resource competitors – China, the United States and India – will even try to meet their commitments. This point was made by Professor Henry Ergas in evidence to the Inquiry on 10 August 2011:

Treasury has modelled a scenario in which the rest of the world adopts such a scheme and we do too. It also models the somewhat irrelevant case in which the rest of the world acts and we do not. But it has not modelled, or if it has modelled has not released, the most relevant scenario, which is the one in which we impose such a scheme and our major resource competitors do not.²⁸

10.58 Criticism of this lack of additional modelling was also made by the Centre for International Economics:

The price pathway, the availability of international abatement to mitigate Australian costs, and the competitiveness implications for individual Australian industries all depend on the simulation configuration, data and parameters embedded in the international model (GTEM) used by Treasury. The reported analysis provides one particular scenario for global action based around one set of parameters. Unfortunately this provides little understanding of the overall sensitivity or risks associated with Australian policy making in the context of global action.

27 Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 10 August 2011, p. 14.

28 Professor Henry Ergas, Professor of Infrastructure Economics, University of Wollongong, *Committee Hansard*, 10 August 2011, p. 61.

Further, the simulation configuration has a number of implicit assumptions about how a world market for abatement may ultimately work. There is limited reported information to understand the effect of changes to these implicit assumptions.²⁹

10.59 It went on to raise another concern about the way the Treasury had modelled the international scenario for the carbon tax:

The Productivity Commission recently noted that most countries are not implementing carbon policies in the most cost effective way. This means that as policy is currently emerging, it is unlikely that the true cost of abatement will be revealed in international markets. This is similar to having distortions to the ideal market (as simulated by Treasury).

The effect of these distortions is similar to increasing the marginal cost of abatement so that distortions in the lowest cost abating countries will be most important from a risk perspective. Within a global trading framework, the costs to Australia are as much a function of the efficiency of other country policies as they are a function of domestic Australian policy.³⁰

10.60 The cases of Canada and the United States of America can be used to illustrate the flaws in the Treasury's assumption. Firstly, the Treasury has conceded that neither the United States nor Canada have met their theoretical targets under the Kyoto Protocol, even though it was adopted in 1997 and went into force in 2005.

10.61 When pressed in relation to action by Canada to meet its promised targets, Ms Quinn stated '(t)he Canadian government has still maintained its commitment to achieve its pledge of similar reductions to the United States'.³¹

10.62 However, the current Canadian government was elected on a platform of not implementing a carbon tax. It is true that it has stated it will achieve its abatement commitments in other ways, however, it has not shown any strong determination to do so. In fact, according to a Report released by a research group based at the University of Ottawa on 22 September 2011, 'Canada's federal approach to climate change has been characterised by its changing focus, uncertainty and lack of commitment'.³²

10.63 The United States has taken some steps to reduce its carbon emissions but a recent decision by the Environment Protection Agency to postpone the first round of

29 Centre for International Economics, *Notes on 'Strong growth, low pollution' – Modelling and related issues*, September 2011, p. 6.

30 Centre for International Economics, *Notes on 'Strong growth, low pollution' – Modelling and related issues*, September 2011, p. 15.

31 Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 10 August 2011, p. 15.

32 Mike De Souza, 'Canada moving away from ally on climate change action: Report', *Montreal Gazette*, 22 September 2011, <http://www.montrealgazette.com/technology/Canada+moving+away+from+ally+climate+change+action+Report/5444318/story.html> (accessed 27 September 2011).

planned greenhouse gas regulations has been described as 'the latest step in the Obama Administration's lengthy walk back of its promised climate policies.'³³

10.64 Asked about the possible effect of the United States not meeting its Cancun and Copenhagen commitments, which are greater than Australia's it must be noted, Ms Quinn was understandably unsure as to what might result:

In terms of the economic modelling, if the United States was not to take action to meet their Cancun agreement of a 17 per cent reduction relative to 1990 levels, it would then depend on what happened in other countries. Would other countries take more action to achieve an environmental outcome that would reduce dangerous climate change?³⁴

10.65 If the assumption that countries will meet their Cancun commitments is optimistic, then surely the hope that they will increase carbon reduction activities to take up the shortfall created by the United States' failure to meet its promises is patently unrealistic.

10.66 Treasury's modelling assumes not only that countries implement their Cancun commitments but continue on a rising abatement trajectory even after the Cancun commitment period ends. However, the Cancun commitments are entirely voluntary.

10.67 In modelling the consequences of these abatement assumptions, Treasury starts from the premise that an internationally uniform carbon price will emerge from 2016. Treasury officials were asked about how this will happen on 10 August 2011. It stated:

CHAIR: Lenore Taylor wrote in a recent article—and I think this is similar to what you just said:

The government says it is not assuming countries such as the US actually have an emissions trading scheme, but rather that they would try to reach their emission reduction targets at a cost no higher than the international price.

Do you agree with that?

Ms Quinn: Yes.

CHAIR: That is what Treasury is assuming? That is a fair reflection of your assumption?

33 Bryan Walsh, 'Al Gore and the Alternate Realities of Climate Change', Time, 20 September 2011, <http://www.time.com/time/health/article/0,8599,2093955,00.html>, (accessed 27 September 2011).

34 Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, The Treasury, *Committee Hansard*, 10 August 2011, p. 33.

Ms Quinn: What we are assuming is that there are mechanisms in countries to achieve emissions that result in an implicit or explicit carbon price based on those economies. It does not mean it specifically has to be an emissions trading scheme within all countries. It is the case that we are assuming that there is a continuation of the international offset market which exists now in order for Australia to be able to purchase permits from overseas. So we are assuming that there is an arrangement, either through an international framework or through bilateral trades, such that Australian liable entities are able to purchase offsets overseas. That is not the same as saying that all countries have to sign up to an international binding agreement, and it would be inaccurate to make that statement.³⁵

Committee Comment

10.68 As stated above, the criticism of the assumption is not that no action will be taken, but that less than complete action is more likely – in particular from the major economies and Australia's direct trade competitors.

10.69 The Committee, therefore, believes it is legitimate to criticise the failure by the Treasury to model any scenario where the international community meets something less than all of its promised emission targets as a failure on its part.

10.70 The Treasury assumptions that countries will implement their Cancun and that there will be a rising abatement trajectory after the end of the Cancun commitment period are questionable. As noted above, those commitments are voluntary. Long experience in many other areas — including international trade and investment, as well as myriad environmental and social areas — shows that countries frequently under-deliver or renege on voluntary commitments. As a result, it is at the very least imprudent to assume those voluntary commitments will indeed be delivered, and is not the way modelling would be done for (say) defence decisions. As for the extension of those commitments, there is no reason whatsoever to assume that will occur.

10.71 Previously Treasury denied that this meant that an international carbon trading scheme would be in place by then. It now accepts that there will be some mechanism by which all the advanced economies trade emissions by 2016, will be able to trade – be it between firms, governments or both – using a settled carbon price. However, Treasury nowhere explains what that mechanism is, or why it is plausible that it will indeed be in place, and capable as acting as the means by which a uniform international price emerges, by that date. Rather, the Committee believes it is surely obvious that no such mechanism will be in place by that time, or indeed, any time soon after that.

10.72 To then examine how the abatement targets and associated carbon prices translate into economic activity, Treasury relies heavily on the MAC curves

35 Senator Mathias Cormann, Chairman, Senate Select Committee on the Scrutiny of New Taxes and Ms Meghan Quinn, Macroeconomic Modelling Division, Macroeconomic Group, the Treasury, *Committee Hansard*, 10 August 2011, p. 15.

mentioned above. In essence, these act as the representation in the model of induced technical change: that is, of innovation that is stimulated by progressively higher carbon prices. The greater the extent to which such innovation is stimulated, the lower will be the economic cost of reducing carbon emissions.

10.73 In itself, the assumption that higher carbon prices will stimulate emissions-reducing innovations is plausible. But it is apparent that the reason this mechanism works as well as it does in free market economies is that the price increases hold out the promise of profits to innovators who can develop products or processes that cost-effectively economise on the input whose price is rising. International intellectual property laws, reflected in Australia's international obligations, ensure innovators can charge prices for those innovations that capture for them the social value generated by their innovations.

10.74 The Committee believes that it is at this point, the Treasury model goes off the rails. In effect, it assumes for the GTEM modelling — which covers the entire world other than Australia — that the induced innovations are effectively available at no cost. This completely unrealistic assumption (which implies the rest of the world abandons currently binding commitments to intellectual property laws) is hardly innocent. Rather, it understates the extent to which carbon intensive activities must shrink to achieve emissions reductions targets and hence reduces the world income loss consequent on emissions reduction. In turn, higher world income improves Australia's terms of trade and hence the income levels we can achieve under various emissions reductions scenarios.

10.75 Unfortunately, there is no sensitivity testing in Treasury's report of the implications of the assumptions made with respect to these MAC curves. However, the sensitivity tests on this assumption reported in the CPRS modelling suggest the impacts of varying those assumptions would be very significant. Why that is not even mentioned in Treasury's report is a matter of concern. Indeed, it is not even made clear in Treasury's report that no cost has been imputed to induced innovations in the GTEM model (see below).

10.76 Additionally, Treasury's modelling assumes Australia can meet its abatement targets largely by importing abatement from developing countries. Moreover, a substantial share of those imports is projected to come from countries in the former Soviet Union and Asia that have low estimated abatement costs.

10.77 However, there is no reason to believe these countries will develop credible institutions that can assure the quality of claimed abatement efforts. This is especially important because trade in abatement differs from conventional trade in that both the parties to this trade have an interest in defrauding the government (who is the sole consumer of abatement). As a result, enforcing the quality of international transactions is especially complex and costly. But Treasury simply assumes those difficulties away, and takes it for granted that the seemingly intractable problems associated with corruption and low institutional competence in these countries have been solved.

10.78 Thus, there is no testing of the implications should the world not proceed on the path to coordinated global abatement while Australia remains locked in to the government's carbon tax. There is, in other words, no modelling of the implications of unilateral abatement, or of abatement by Australia not matched by abatement by our foreign competitors.

10.79 As for the assumptions about the availability of foreign abatement, it is in the nature of Treasury's modelling that abatement costs will be very much affected by the presence or absence of low abatement cost countries. In other words, including or excluding a source of abatement with low costs has a more than proportional impact on the overall estimated cost of achieving a given abatement target. As a result, it is likely that Treasury's estimate of the costs of the government's proposal are highly sensitive to the assumptions about the feasibility of buying abatement from a wide range of low cost sources overseas. However, Treasury does not provide any sensitivity testing in this respect.

The assumption of full employment

10.80 The modelling assumes 'in the long run that there is an adjustment of the labour market back to a structural rate of unemployment.'³⁶ In other words, full employment. The Committee accepts that this is a common assumption to make in economic modelling, but – even leaving aside the issue of whether or not this structural rate would be unaffected by actions to forsake much of Australia's comparative competitive advantage in low cost coal-fired power generation – it does not follow that the fruit of the assumption is beyond criticism.

10.81 Furthermore, the government continues to present what is a Treasury assumption underpinning the modelling as if it is a modelling result.

10.82 The Treasury modelling gives prominence to the claim that '(j)obs will continue to grow under carbon pricing. By 2020, national employment is projected to increase by 1.6 million jobs, with or without a carbon price.'³⁷ This additional employment will be particularly concentrated in the services sector.³⁸ Far less prominence is given to the concession elsewhere in the modelling that substantially lower real wages (relative to baseline) would be required to achieve such outcomes – almost 6 per cent lower by 2050 and still steadily declining.³⁹

10.83 The SGLP Report states:

36 Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 10 August 2011, p. 17.

37 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 1.

38 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 65.

39 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, Chart 5.12: Real Wages – Change from global action scenarios, p. 101.

The shifts in jobs between industries caused by pricing carbon will be small compared to those caused by ongoing technological change and income growth. They will also be small compared to the usual churning of employment between firms and industries every year.⁴⁰

10.84 It goes on to say that '(t)he impacts of carbon pricing on output and employment growth vary widely across sectors, with some sectors growing faster, and others more slowly.'⁴¹ What this fails to acknowledge is that some sectors of the economy are truly national, whereas others are concentrated in a small number of regional areas. This is particularly so for the industries that will be most affected by the carbon tax – the power generation and the mining industries.

10.85 The Committee's concerns about the Treasury's assumptions concerning employment levels are:

1. having built the assumption into the modelling, claiming it as a result that shows full employment does not prove that this will in fact be the case;
2. the assumption does not reflect the medium and short term effects of the government's carbon tax policy; and
3. the assumption operates across the entire economy, but it does not follow that full employment will be maintained in all regions.

10.86 The actual effect of the government's carbon tax, as distinct from its assumed effect, has been addressed in submissions to the Inquiry from New South Wales Treasury⁴² and the Moe and District Residents Association.⁴³ It has been raised in public statements⁴⁴ and by witnesses from regional areas in their evidence to the Inquiry.⁴⁵ Chapter 6 examines the effect of the carbon tax on regional communities in more detail.

40 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 8.

41 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 103.

42 New South Wales Treasury, *Submission 81*.

43 Moe and District Residents Association, *Submission 99*.

44 For example, Department of the Treasury, Western Australian Government, *Preliminary Assessment of the Impact of the Proposed Carbon Tax on Western Australia*, 21 August 2011, http://www.treasury.wa.gov.au/cms/uploadedFiles/Treasury/Publications/Preliminary_Assessment_Impact_Proposed_Carbon_Tax_on_WA_August2011.pdf (accessed 22 August 2011) and Deloitte Access Economics report, at http://www.premier.vic.gov.au/images/stories/documents/mediareleases/2011/0_DAE_report.pdf, (accessed 22 September 2011).

45 See *Committee Hansard*, 3 August 2011 and 5 August 2011.

10.87 Treasury provides no sensitivity testing of its assumptions about the speed at which the labour market reverts to full employment. Additionally, Treasury implicitly but importantly assumes the equilibrium rate of unemployment is unchanged by the carbon tax, but this assumption is plainly incorrect - rather, the tax interaction effects discussed below (that is, the distortions that arise from the interaction of the carbon tax and the income tax) must mean that equilibrium rate rises. However, the Treasury provides no estimate of that increase or of the impact of varying its assumption on labour market outcomes.

10.88 The Committee is of the view that Treasury's modelling of the labour market effects of the carbon tax is unclear to the point of being misleading. In effect, the Treasury presents the results as if unemployment was continually at its equilibrium rate, in other words, it appears as if the labour market continuously provides what amounts to full employment.

10.89 However, subsequent to the publication of its report, the Treasury has accepted that in the MMRF model it uses, it takes the labour market 5 to 10 years to adjust to a shock such as the imposition of a carbon price. But there is no sign of that adjustment, and the associated unemployment, in its modelling results. This suggests Treasury has altered MMRF to ensure full employment, presumably by requiring the adjustment to be completed within a year; but it nowhere explains how it has do so, or more important, how that can possibly be justified.

Modelling of the effect of the carbon tax on regional areas

10.90 The downturn in manufacturing industries is already taking a toll on some regions of the country. In the areas most reliant on power generation and coal mining for employment the effects of the government's carbon tax will be accentuated. The carbon tax will also affect regional communities that are reliant on heavy vehicle transport.

10.91 The difficulties with the assumption of rapid, frictionless adjustment to these changes are shown up most starkly by Frontier Economics' report for New South Wales Treasury:

This *aggregate* employment result [that the effects on employment are expected to be only modestly adverse] masks the underlying structural adjustment necessary for the economy to achieve this moderate result, which requires employment and other resources to flow freely between sectors and/or regions.⁴⁶ [emphasis supplied]

10.92 It is also notable that some of the Treasury modelling explicitly does not capture all of the costs associated with such major structural adjustment. For example, it is stated of the GTEM model used by Treasury that:

46 Frontier Economics, *Carbon price modelling: A report prepared for the NSW government*, August 2011, p. 5.

GTEM assumes labour and capital adjust perfectly across industries, and it does not capture as many of the transition costs as would be experienced in the real world.⁴⁷

10.93 What is being assumed by the Treasury is that, even though there will be a loss of jobs in coal mining in the La Trobe Valley, for example, more jobs will be created in other areas and over all, employment will remain the same. This, it should be noted, is predicated on continued population growth to 35 million. The notion that people who have spent all their lives working as miners in Traralgon will be able to obtain work in service industries on the Gold Coast is a long bow to draw.

10.94 This is no disrespect to those workers, but merely the statement of an economic reality that disappears under the assumption being made by the Treasury.

10.95 None of this, of course, takes into account the knock-on effects of job losses in regions that are heavily reliant on emissions-intensive industries.

Modelling of price impacts of the carbon tax

10.96 In 2010 the government introduced legislation to split the renewable energy targets scheme (RET scheme) between small-scale and large-scale schemes. On 21 June 2010, the Minister for Finance and Deregulation, Senator the Hon. Penny Wong, told Parliament that this change was expected to increase electricity prices by around 4.4 per cent over four years.⁴⁸

10.97 In December 2010, Queensland's energy regulator estimated that these changes to the RET scheme would increase power prices in that state by 2.9% in 2011. Similarly, in January 2011 the New South Wales Independent Prices and Regulatory Tribunal (IPART) estimated that changes to the RET scheme would push its power prices up by 6% in 2011-12.

10.98 These figures were cited to Treasury when it gave evidence to the Inquiry on 10 August 2011. It was then asked about the accuracy and reliability of its modelling of power prices generally:

The point here is that Commonwealth forecasting of the impact of policy changes on the cost of electricity is not very good, is it? I am interested in what role Treasury had in assessing the impact of the RET on electricity prices moving forward.

Mr Raether: From memory, the report you are referring to was commissioned by the Department of Climate Change and Energy Efficiency. As to that particular report, you might do best to direct questions to them. I think that was a report by MMA—a consultancy—but I do not

⁴⁷http://www.treasury.gov.au/carbonpricemodelling/content/report/downloads/Modelling_Report_Consolidated_update.pdf, Chapter 2, p. 27. (accessed 2 October 2011).

⁴⁸ Senator, the Hon. Penny Wong, Minister for Finance and Deregulation, *Senate Hansard*, 21 June 2010, p. 3801.

know whether my colleagues want to comment on the extent to which Treasury provided comments on that exercise.

Ms Quinn: I want to provide some additional information. What Mr Raether says is true; it was done by the Department of Climate Change and Energy Efficiency. The number you referred to—the four per cent—was an average across Australia. There were variations within that across different states. It was the case that the expectation was that, as with the carbon price, there would be a front-loading of the increase as a result of the renewable energy target, there would be an increase in electricity costs as people adjusted and increases in future would be less.

...

Ms Quinn: We were talking about going from a renewable energy certificate of very low up to a large number. That initial step change can be quite large and then incremental changes over time are quite small. So you get a step change in the knock-on effect of that and so the percentage increase you get in the first year is larger than subsequent percentage changes in the next few years. I do not think you can draw your conclusion that in Queensland it is around 2.9 per cent and therefore the four per cent number is not accurate.

CHAIR: The four per cent number is over four years.

Ms Quinn: That is right.

...

Ms Quinn: ... the 2.9 is the first year and subsequent years are likely to be lower than that as a result of this step change implication. The other thing to note is that the policy framework has changed since the modelling you referred to with the separation of the renewable energy target into different elements, and that has implications for the costings.⁴⁹

10.99 Treasury took the question on notice. Its response did not directly address the question of the accuracy of its earlier predictions of the effect of the government's changes to the RET scheme on electricity prices. Nor did it address Treasury's role in the RET forecast. It can only be concluded that it stands by its modelling and its prediction.

10.100 The Committee is of the view that this modelling is unreliable. The public can have no confidence that power prices will only rise in line with Treasury predictions as a result of the changes to the RET and the carbon tax.

49 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes, and Mr Robert Raether, Principal Advisor, Industry, Environment and Defence Division, Department of the Treasury and Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 10 August 2011, p. 10.

Committee comment

10.101 The Committee believes that the evidence it has received shows that there are a number of quite significant shortcomings with the modelling conducted by Treasury:

- it has not modelled the quite probable scenario where Australia imposes a carbon tax and other countries, and especially Australia's major resource competitors, do not;
- it has not performed a cost-benefit analysis of the effect of imposing a carbon tax or a proper Regulatory Impact Statement;
- it assumes that the economy will maintain full employment;
- its estimate of the effects of changes to the Renewable Energy Target scheme is at odds with analysis conducted for the New South Wales and Queensland governments;
- it has not released any modelling of the impact of a carbon tax on specific regions of Australia; and
- it has not allowed public scrutiny of its full models, datasets and specifications.

10.102 Treasury's modelling has not been presented in a balanced and objective way, nor has Treasury answered the questions put to it in a manner that respects the importance of the Senate inquiry process.

10.103 First, with respect to the SGLP report, it is at times seriously misleading, including by not making clear the assumptions on which the analysis rests. For example:

- it never makes it clear how Treasury has modelled the labour market adjustment process but nonetheless emphasises that employment continues to grow and full employment persists;
- nowhere in the report is it made clear that some form of generalised international carbon trading has been assumed, and never is it explained what the form of that trading is or how it achieves a uniform world carbon price; and
- the report never explains that it assumes that for the purposes of the GTEM model, induced innovation is not fully costed.

10.104 Moreover, in answering questions about the modelling, Treasury withheld or misstated crucial information. Thus, as noted above, Treasury maintained categorically that the GTEM model was publicly available, when it was well known that that was not the case. Additionally, Treasury claimed that the MAC curves were fully costed, saying that statements by Professor Ergas, as cited above, were incorrect. It subsequently admitted that Professor Ergas' statement was indeed correct.

10.105 Indeed, even the written replies Treasury provided were in important respects seriously questionable. Thus, in replying to Professor Ergas on the MAC curves, Treasury said that its assumption of un-costed innovation was 'conservative', as:

raising the costs associated with the MAC curves in the GTEM model results in a lower world carbon price path to achieve any given environmental target as global high emission industries reduce emissions more quickly.⁵⁰

10.106 However, as is clear from the sensitivity testing Treasury reported in the case of CPRS, the economic costs of abatement efforts are much higher when the GTEM MAC curves are properly costed, as carbon intensive production shrinks much more quickly. By not stating this, but rather presenting its approach as 'conservative', Treasury was less than entirely forthright.

10.107 A similar misstatement occurs with respect to the assumptions about the labour market. There again, in replying to Professor Ergas, Treasury suggested that the impact of an ever-increasing carbon price would be slight, and that this would be clear in a forward looking model.⁵¹ (A model is forward looking if market participants form expectations about the future and act on those expectations.) This is problematic, if not entirely incorrect, for at least two reasons.

10.108 Firstly, it is not accepted, nor is it acceptable practice, to use a backward looking model (as Treasury has done) but then cherry pick a single area (in this case, employment) and pretend it can be assumed to behave as if it were forward-looking *without the other model outputs also changing*. Rather, all the modelling should be placed on a forward-looking basis if those inferences are to have any weight.

10.109 Secondly, even putting that aside, Treasury claims that:

... after the initial introduction of carbon pricing the year to year movements in the carbon price are expected to be relatively small, allowing the labour market to work through most of the initial adjustment over time.⁵²

10.110 This is, at best, unproven, as the carbon price is increasing more rapidly than the economy's growth rate, while the MAC curves Treasury uses appear somewhat front loaded (so reductions in the costs of abatement occur relatively soon). To that extent, the rising carbon price would be pushing against ever slower reductions in the

50 Additional information received, document 7: Letter to the Committee dated 30 September 2011, from Dr David Gruen, Executive Director of the Macroeconomic Group – Domestic, Department of the Treasury, received on 4 October 2011.

51 Additional information received, document 7: Letter to the Committee dated 30 September 2011, from Dr David Gruen, Executive Director of the Macroeconomic Group – Domestic, Department of the Treasury, received on 4 October 2011.

52 Additional information received, document 7: Letter to the Committee dated 30 September 2011, from Dr David Gruen, Executive Director of the Macroeconomic Group – Domestic, Department of the Treasury, received on 4 October 2011.

marginal cost of abatement, necessitating increasing falls in real wages for full employment to persist.

10.111 The Committee again recommends as per Recommendation 1 that the carbon tax be opposed by the Parliament.

Recommendation 4

10.112 The Committee recommends that, should the government remain committed to proceeding with its carbon tax, before any vote the Senate should demand that:

- **the government release all of its modelling, including the actual models, datasets and specifications used by the Treasury, to allow third party review;**
- **the government establish an Independent Expert Panel to review its modelling approach and framework;**
- **the Productivity Commission be asked to undertake a cost-benefit analysis of the proposed carbon tax;**
- **the legislation should be amended to ensure that any increase in the tax or lowering of the emissions cap be made a disallowable instrument and to ensure that carbon permits are not private property.**

Government Senators' Dissenting Report

Introduction

This report is the latest in a long line of reports by parliamentary committees into carbon pricing and climate change policy. It is another in which we see the Coalition display yet again that it is their intention to do nothing about climate change by reducing Australia's greenhouse gas emissions.

The Coalition's frame of thinking outlined in the Coalition senators report is not one we share. It is one with which we fundamentally disagree.

This dissenting report comprises eight chapters.

Chapter one sets a very brief scientific basis for acting on climate change by reducing greenhouse gas emissions. To be frank, this is the Rubicon that many Coalition members won't cross. Their rejection of the science is fundamental to their opposition to a carbon price.

Chapter two sets out a brief description of the economic basis for a carbon price mechanism.

Chapter three deals with the myth that Australia is acting alone in reducing greenhouse gas emissions.

Chapter four considers the economic modelling carried out by Treasury which informs the policy design and of the carbon price mechanism.

Chapter five considers the tenor of the evidence received concerning the small and medium sized businesses under the carbon price mechanism.

Chapter six considers some of the long-term opportunities the carbon price mechanism will generate for employment, innovation and business diversification.

Chapter seven considers how the carbon price mechanism will deliver long term investment certainty and the contradictions between what some businesses tell politicians and the media and what they tell investors.

Chapter eight considers the analyses done of the Coalition's "Direct Action" policy and concludes that it is a sham.

Appendix A sets out the details of the carbon price mechanism architecture agreed to by the Multi-Party Climate Change Committee.

Summary of findings:

- There is a strong foundation of scientific fact underpinning the imperative to act on climate change. The Coalition majority report rejects science – it is a recipe to do nothing.
- There is a sound economic basis for the implementation of a carbon price mechanism.
- Australia is not acting alone - the rest of the world is moving on carbon pricing;
- The Commonwealth Treasury's economic modelling of the carbon price mechanism is robust, comprehensive and provides a considerable degree of certainty about the likely outcomes of the introduction of a carbon price mechanism;
- Small business will not be directly liable for a carbon price under the carbon price mechanism;
- The effects of a carbon price mechanism on small and medium sized businesses will be modest and should be able to be passed through to consumers who will be adequately compensated under the household assistance package;
- The volume and intensity of disinformation in the public debate around carbon pricing has created a level of confusion, particularly among small and medium sized businesses, that threatens their ability to make sound business and investment decisions;
- Small and medium sized businesses will benefit from the assistance with assessing the impact of the carbon price mechanism on their operations and to assist with practical measures that they can take to reduce their energy costs.
- Carbon pricing will generate for businesses prepared to look beyond the short-term, long term investment, employment and diversification opportunities that will far outweigh any modest short-term costs;
- The carbon price mechanism will bring long-term investment certainty – and some emissions intensive businesses have been crying wolf. Sections of the business community are exaggerating the impacts of carbon pricing for political purposes while presenting a bright future to investors.
- The Coalition's 'Direct Action' policy should not be taken seriously by anyone. It is a policy designed to fail. If it meets the Coalition's emissions reduction target, it will have torn the Commonwealth budget to shreds. It is a policy designed to be disposed of as soon as it is convenient for the Coalition to do so.

Chapter 1 - The Scientific Basis for Acting on Climate Change

It is not government senators' intention to traverse in detail the science of climate change in this report. However, it has become clear during the course of this inquiry and elsewhere, that there is belief among some of the participants in this inquiry and in the wider community that there is no compelling scientific reason to act on climate change. To such people, if there is no climate change, there is no need for a carbon price. Unfortunately, it isn't that simple.

Government Senators wish to make their position clear. There is absolutely no doubt. The science is irrefutable. The world's climate is changing in ways that will have a negative impact on the environment, ecosystems and human systems including our economy, our cities, our food production systems and much else. This climate change is largely human induced and is occurring at a far more rapid rate than any naturally occurring climate change in the geological past.¹

The work of the Australian Academy of Science clearly points to greenhouse gas emissions from human activity causing recent changes in the earth's climate and anticipates global temperatures continuing to rise significantly over the next century and beyond.²

The Bureau of Meteorology has clearly presented the scientific basis for greenhouse-gas-induced climate change within the context of a complex, highly interactive, naturally-variable and human-influenced global climate system.³

While a lot of the science of climate change is complex, much of it is high school textbook material that is over a century old.

Our scientific understanding of the physics of radiation, combined with our understanding of climate change from the geological record clearly demonstrates that increasing greenhouse gas concentrations will inevitably drive global warming. It is a scientific fact first described by Joseph Tyndall in 1861, that in the absence of the small fraction of the atmosphere comprised of naturally occurring greenhouse gases the surface of the planet would be 30 degrees Celsius cooler than it is today. The natural greenhouse effect created by this small fraction of the atmosphere stops us freezing. To suggest that if we double the concentration of greenhouse gases in the atmosphere and there will be no effect, much less a warming of the planet; defies

1 Cleugh, H. Stafford Smith, M. Battaglia, M. and Graham, P. (eds); "Climate Change – Science and solutions for Australia", CSIRO Publishing, Collingwood, 2011. p.x

2 "The Science of Climate Change: Questions and Answers", Australian Academy of Science, Canberra; www.science.org.au/policy/climatechange.html

3 "The Greenhouse Effect and Climate Change", Bureau of Meteorology, Canberra; <http://www.bom.gov.au/info/GreenhouseEffectAndClimateChange.pdf>

century old science, which ironically includes the science that is behind most of the technological advances of the past century or two.

As far as we know - which is a lot - what we have on Earth is not replicated anywhere in the known universe; which is a very, very big place. Earth is a freak of nature and cosmology. It would be a tragedy that for reasons of indolence or greed or ignorance or negligence, humans were to do irreparable damage to the natural systems that support our civilisation having had the opportunity and the means to avoid it.

Despite this, the science underpinning our knowledge of climate change has been challenged by a mendacious, well organised and well funded "climate change sceptic" movement whose goal has been to cast doubt and discredit climate change science on behalf of interests who for commercial and ideological reasons are opposed to reducing greenhouse gas emissions.

The Authors of *Merchants of Doubt*, Naomi Oreskes and Erik Conway, supported by extensive documentary evidence, show that not only is climate change denial using the same misinformation techniques as the tobacco industry used to sow doubt about the link between smoking and cancer, that industry used to sow doubt about the effects of acid rain on northern hemisphere forests and that the chemical industry used to deny the link between CFCs and ozone depletion; but that it is often the same groups and the same people. These anti-science activists often hide behind names as unlikely as "Friends of Science".⁴

In Australia we see a similar phenomenon, with front organisations often using names that aim to capture the cachet of a well-known "martyr". They present themselves as oppressed outsiders being ignored by an elite establishment, when in reality they are ignoring or distorting accumulated scientific knowledge.

We acknowledge that people are free to believe whatever they wish. On the subject of climate science, we prefer the scientific conclusions of scientific institutions including the Australian Academy of Science, the CSIRO, the Bureau of Meteorology, the Royal Society, NASA and the university-based research academies around the world who provide the evidence on which governments must base their policy responses to climate change.

4 Oreskes, N. and Conway, E. "Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues From Tobacco Smoke to Global Warming"; Bloomsbury Press, New York, 2010.

Chapter 2 - The Economic Basis for a Carbon Price Mechanism

Climate change needs to be understood in the context of economic history. Since industrialisation, the global economy has been based on an energy and production system that fails to recognise carbon dioxide and other greenhouse gases as pollutants. The cost of greenhouse gas pollution has not been borne by its producers, but has been externalised to be borne by the environment and society as a whole. High school business studies students understand the concept of externalised costs. They understand that a cost externalised is a cost borne elsewhere.

Currently, the price of most goods and services we consume does not include the external cost to the climate and the environment associated with greenhouse gases emitted in their production and consumption.

These costs need to be considered when governments, businesses and individuals make decisions about what to produce, what to invest in and what to consume. This means that the true cost of greenhouse gas pollution needs to be internalised to its production and use, or put another way; greenhouse gas emissions need to have a price.

It is price that changes behaviour. Price influences production and consumption decisions, capital allocation and investment flows. In the case of a carbon price; towards production, consumption and investment in goods and services with lower embedded emissions.

A carbon price will create the incentive for large emitters to reduce pollution, and stimulate investment in low emissions technologies and processes. It will provide greater certainty for business investment. A carbon price will enhance Australia's long-term economic competitiveness.

It will also enhance our ability to influence the direction of international climate change negotiations and provide encouragement for an agreement including all major emitters.

Once a carbon price has been established and the incentives have been put in place to move to a low carbon pollution economy, we will decouple the historically close relationship between greenhouse gas pollution and economic growth. A relationship which has our nation's carbon pollution heading to be 24 percent above 2000 levels by 2020 and 44 percent above those levels by 2030 if we do nothing to curb emissions.

A carbon price is an essential component of any credible plan to reduce greenhouse gas emissions cost-effectively. A carbon price gets to the heart of the issue: it makes activities that cause the problem more expensive, and activities that address the problem less expensive. This is a conclusion shared by the OECD, the IMF, the World Bank, the Stern Review, the work undertaken for the Howard Government by

Professor Peter Shergold, the Garnaut Review, and the recent work by the Productivity Commission.

It is worth noting that this view has been the outcome of 37 inquiries regarding action on climate change. Each inquiry recommending that Parliament take action to price carbon and that the most effective measure for taking action on climate change is through a market based mechanism.

This view is shared by the many of the witnesses who gave evidence to the Committee including;

Mr McAuliffe: We agree that a market based approach can be a very efficient economic instrument to deal with it. That is not the only instrument. We have said elsewhere in debates in Canberra, and I do not know if you know about these discussions, that it needs to be a comprehensive and broad ranging approach, not just a single instrument.⁵

Ms Magarey: We believe it is important to have a measured policy response to the issue of climate change. Putting a price on carbon emissions, in our view, represents an economically effective way to reduce carbon emissions... One of the most compelling reasons why we support a price on carbon is that it will provide business and investors with the certainty and confidence that they require to make long-term decisions about the future allocation of their capital.⁶

Carbon pricing works because it sends a clear signal across the economy. It creates an incentive to uncover the cheapest ways of reducing emissions. It allocates capital to improve efficiency and reduce emissions intensity. Over time, the most efficient, least polluting firms will have an advantage over less efficient, higher polluting firms. Pricing carbon will break the link between economic growth and emissions growth.

Treasury modelling concludes that the Australian economy will continue to prosper while cutting carbon pollution. Real gross national income per person is expected to increase from today's levels by around \$9,000 per person to 2020 and more than \$30,000 per person by 2050. Employment is projected to grow strongly with a carbon price. Around 1.6 million jobs are projected to be created to 2020 and a further 4.4 million to 2050.

At the sectoral level, a carbon price will change the way we produce electricity. Over time it will dramatically reduce our reliance on emissions-intensive coal-fired generation, and increase our use of renewable energy, gas and other low emissions technologies.

5 Mr. Tim McAuliffe, Alcoa Australia Ltd, Proof Committee Hansard, 29th April 2011, p.28

6 Ms Geraldine Magarey, Institute of Chartered Accountants in Australia, Proof Committee Hansard, 17th May 2011, p. 10

As noted by Nicholas Stern, “Greenhouse gas emissions are externalities and represent the biggest market failure the world has seen.”⁷

In dealing with this market failure, we face a choice about how to reduce greenhouse gas emissions.

On the one hand, a market based price on emissions that reflects the costs they impose on society and the environment signals to market participants that they need to adapt and create solutions that incorporate the cost of their emissions into the price of their goods and services. This is the price incentive to reduce emissions.

On the other hand, there is another, non-market, subsidy approach to reducing emissions; that is by regulation through which government intervenes in decisions about investment and capital allocation. The price for the right to intervene directly in these decisions is a subsidy paid off the government's balance sheet to the emitter. Under this approach, the government seeks to control and direct production and consumption decisions by individuals and firms by provision of a subsidy allocated through a process which involves no market transaction for a good or service.

The former market based price is what characterises the government's approach through the carbon price mechanism in its Clean Energy Future legislation. The latter non-market regulatory approach is what characterises the Coalition's Direct Action policy.

A carbon price will encourage the largest emitters to reduce the greenhouse gases they put into the atmosphere. A carbon price will give economic impetus to the efforts of scientists, researchers, investors and entrepreneurs to find less-polluting ways of doing the things we take for granted in a modern economy. It will use the fundamental economics of markets to kick-start this transformation and to ensure the transformation unfolds in the lowest cost way.

Carbon pricing is an economic reform that will put a price tag on activities that have significant negative spill over effects on the rest of society. In this way, the costs of carbon pollution will be factored into our behaviour and our decisions in the future. The end result will be lower carbon pollution, reduced risks of dangerous climate change and better outcomes for society as a whole.

7 Stern, N. “The Economics of Climate Change” Richard T. Ely Lecture, American Economic Review: Papers & Proceedings May 2008, 98:2, 1–37, p.1

Chapter 3 - International Action: The Rest of the World is Acting

During the course of this inquiry, many submitters and witnesses expressed a view that while they accept the science of climate change and that there ought to be carbon price mechanism of some sort to provide a price incentive to reduce emissions, Australia is acting alone on pricing carbon and will be at a disadvantage to our trading partners and competitors until the rest of the world acts. Essentially, the position being put by these submitters and witnesses is that Australia should continue to wait-and-see.

The Queensland Chamber of Commerce and Industry, at a public hearing Brisbane told the Committee:

“Queensland business acknowledges that it has a social responsibility to minimise the impacts that its activities have on the environment. It is also aware that it needs to work cooperatively with all levels of government and the wider community to address important environmental issues such as climate change. However, overwhelmingly, the majority of Queensland businesses do not support the introduction of a carbon price mechanism, especially in the absence of international agreement and unilateral (sic) action to address climate change.”⁸

The Australian Petroleum Production and Exploration Association put it this way:

“APPEA supports a national climate change policy that delivers abatement at least cost and facilitates investment decisions that are consistent with there being an international price on carbon.”⁹

The Minerals Council of Australia told the Committee that they “accept the concept of global warming” and are “not interested in a debate about the science”. Furthermore, “We accept the concept of the precautionary principle.” However, they placed a caveat on actually doing something about it, saying before a carbon price mechanism could be implemented, three “platforms” need to be “aligned”; one of which is “global action that is concerted and comparable by all major emitters.” Or in other words, “A global agreement that covers all major emitters.”¹⁰

The Australian Coal Association, representing the black coal industry, told the Committee:

“The black coal industry supports introduction of a carbon price as part of the efforts to reduce Australia's greenhouse gas emissions, provided this is consistent with sound policy principles and the national interest. But

8 Mr. Nick Behrens, Queensland Chamber of Commerce and Industry; Proof Committee Hansard, 25th July 2011, p.1

9 Ms. Belinda Robinson, Australian Petroleum Production and Exploration Association; Proof Committee Hansard, 9th June 2011, p.10

10 Mr. Mitch Hooke, Minerals Council of Australia; Proof Committee Hansard, 9th June 2011, p.30

Australia must act in step with, not ahead of, our major trade competitors and partners.”¹¹

The problem with a wait-and-see approach is that it delays reform that is inevitable and the delay increases the cost. Delay now can only add to business and investment uncertainty. For firms to be able to make long-term investment decisions, we need a credible, coherent, long-term, market price signal that is efficient, least-cost and provides a certain policy framework.

On the question of international action, the Productivity Commission, in its recent report, *Carbon Emission Policies in Key Economies*¹² found that in the nine countries it studied: China, Germany, India, Japan, New Zealand, South Korea, the United Kingdom and the United States who between them account for a substantial portion of global GDP:

“More than 1000 carbon policy measures were identified in the nine countries studied, ranging from (limited) emissions trading schemes to policies that support particular types of abatement technology.”¹³

These measures focus to varying degrees on emissions from electricity generation and transport sectors, other sectors are commonly targeted as well. For example, most countries were found to have policies encouraging reforestation or curbing deforestation.

Beyond the countries studied by the Productivity Commission, 89 countries, accounting for over 80 per cent of global emissions and over 90 per cent of global GDP, have pledged to reduce or limit their carbon pollution by 2020 consistent with their commitment made at Copenhagen to take steps to limit global warming to an upper limit of two degrees Celsius.

Scores of countries have already started the transformation to a low pollution economy: thirty two countries and a number of sub-national economies including US states whose economies are bigger than Australia's already have emissions trading schemes.

Australia's top five trading partners — China, Japan, the United States, Korea and others (New Zealand, the United Kingdom, Germany, Italy, France and the Netherlands) have implemented or are piloting emissions trading schemes or carbon taxes at national, state or city level.

New Zealand introduced a trading scheme in 2008 initially covering only forestry but in 2010 expanded it significantly to cover liquid fossil fuels, stationary energy and industrial processes.

11 Mr. Ralph Hillman, Australian Coal Association; Proof Committee Hansard, 9th June 2011, p.39

12 Productivity Commission, “Carbon Emission Policies in Key Economies”, Productivity Commission, Canberra, June 2011

13 Ibid, xiv

China has indicated in its current five-year-plan that it will introduce emissions trading pilot schemes in a number of provinces, including the industrial centres of Beijing, Shanghai and Guangdong. The World Bank recently reported that these regional schemes may be expanded to a national scheme by 2015. China has the world's largest installed renewable energy electricity generation capacity - in 2009, China added 37 gigawatts of renewable power capacity, more than any other country in the world.

India has a tax on coal which is expected to generate over half a billion dollars annually and will be directed to funding research into clean energy technologies.

The US is committed to achieving its target to reduce its emissions by 17 per cent by 2020 (on 2005 levels). The US EPA is regulating large stationary sources of carbon pollution to reduce emissions and incentivise the uptake of clean technologies, and is increasing fuel efficiency standards for cars and light trucks. President Obama has committed to establishing a clean-energy standard to double the share of clean energy (renewables; nuclear; coal with carbon capture and storage; and "efficient" natural gas) in the electricity supply mix from 40 per cent to 80 per cent by 2035.

The Productivity Commission analysed all of the policy approaches and the various complementary assistance measures that have accompanied them in the countries where they apply. They concluded:

"In summary, while the overall impacts of the policy measures analysed appears to be relatively small for most countries, the consistent finding from this study is that much lower-cost abatement could be achieved through broad, explicit carbon pricing approaches, irrespective of the policy settings in competitor economies."¹⁴

Government Senators are of the view that claims that other countries are not acting are of the same character as the claims made by climate change "sceptics" about climate science. They are wrong, ill-informed and in our view merely intended to sow doubt in order to discredit Australian policies to reduce greenhouse gas emissions.

Chapter 4 - Treasury Modelling: Robust and Provides Certainty

One of the perennials of parliamentary inquiries into economic policy is the length and vigour of discussions about economic modelling. This inquiry has been no exception.

In July 2011, the Treasurer and the Minister for Climate Change and Energy Efficiency released the details of economic modelling prepared by Treasury to inform the policy design and public discussion of the carbon price mechanism.¹⁵

The economy-wide modelling contained in the report did not include all the elements of the final policy architecture agreed to by the MPCCC, including a slightly higher start price. An update to the modelling was published in September 2011 taking into account the finalised policy details.¹⁶

The modelling prepared by Treasury strongly indicates that the cost to Australia of reducing greenhouse gas emissions through a carbon price mechanism will be very modest.

The Australian economy will continue to grow, incomes continue to grow and the carbon price mechanism will decouple growth from greenhouse gas pollution and achieve the bipartisan target of reducing emissions to 5 per cent below 2000 levels by 2020 and 80 per cent below 2000 levels by 2050.

The carbon price mechanism is expected to slow Australia's average income growth by around 0.1 of a percentage point per year. In practice, this means that if average incomes were to grow by say, 3.4 per cent per year instead of 3.5 per cent per year; it will take 21 years and two months instead of 20 years and seven months for average incomes to double – a difference of a mere seven months.

Gross National Income (GNI) per person will grow from \$55,800 in 2010 to \$64,800 in 2020 and \$86,900 in 2050.

Gross Domestic Product will increase from \$1.24 trillion in 2010 to \$1.72 trillion in 2020 and \$3.56 trillion in 2050.

Total employment will grow from 11.4 million in 2010 to 13.0 million in 2020 and 17.4 million in 2050.

15 “Strong Growth, Low Pollution – Modelling a Carbon Price”; Commonwealth of Australia, July 2011

16 “Strong Growth, Low Pollution – Modelling a Carbon Price Update”; Commonwealth of Australia, September 2011

Real wages will continue to grow.

Average annual growth in Gross State Product for each of the States will continue to grow in line with recent trends. Under all policy scenarios modelled, all state economies grow strongly and greenhouse emissions are reduced significantly from what they otherwise would be.

Under the carbon price mechanism every sector in the Australian economy continues to grow up to 2020 and beyond.

- Gross output of agriculture increases 12% to 2020;
- Gross output of mining increases on average 77% to 2020, with output of sub-sectors such as gas, iron-ore and non-ferrous ores doubling to 2020;
- Manufacturing output will grow by 5% to 2020, with output in sub-sectors including alumina, cement and steel expected to enjoy growth of 53%, 34% and 10% respectively;
- Construction output will grow by 51%;
- Road freight transport output will grow by 38% to 2020;

By 2050:

- Gross output of agriculture increases 131%;
- Gross output of mining increases on average 201%, with output of sub-sectors such as gas, iron-ore and non-ferrous ores doubling to quadrupling by 2050;
- Manufacturing output will grow by 69%, with output in sub-sectors including alumina, cement and steel expected to enjoy growth of 70%, 130% and 79% respectively;
- Construction output will grow by 195%;
- Road freight transport output will grow by 225% to 2050.

A great deal of effort was made by a number of contributors and participants in the inquiry to cast doubt and create uncertainty over the modelling prepared by Treasury. Treasury officials were questioned repeatedly and at length by Senators on issues going to the robustness of their modelling.

Treasury was repeatedly questioned on whether or not it would, to paraphrase, “release all the information in the modelling?” Presumably the purpose of the questioning was to imply that the modelling and its results have not been open and transparent. It has ranged over whether the modelled scenarios have been accurately reported, whether the modelled scenarios actually reflect the final policy and whether the modelling software used could be made publicly available. Significantly, Treasury was pressed by the Coalition on why it had not modelled an Australian carbon price under a “do-nothing” scenario on the part of the rest of the world; the Coalition's preferred excuse to do nothing.

Professor Henry Ergas gave evidence to the Committee and has written op-ed pieces in the press claiming that Treasury has not been open and transparent in relation to the modelling of the carbon price mechanism.

His cause was later taken up by Senator Boswell:

Senator BOSWELL: My question is: will you allow people access to your modelling to understand the assumptions and parameters?

Ms Quinn: We have provided information about assumptions. That is in the public domain and people can draw their own conclusions from the assumptions.

Senator BOSWELL: I know that. There are very prominent and experienced people, Treasury modellers and accountants, that have gone on record as saying that your modelling has not been released. Certainly you could say that it is pointless putting 10,000 pages or 14,000 pages or 1,000 pages—whatever it is—of modelling in front of me. I would accept that. I do not want it; I could not read it. But there are people who can. Henry Ergas is one of Australia's most prominent people who investigate things like this. He writes for the *Australian*. He has said that the Treasury modelling has not been released publicly. He has asked, in order that taxpayers can scrutinise all the data, which is financed by them, for you to fully release the modelling. Those are not his exact words; I do not want to suggest that that is what he said. He is an economist. He will be coming to this committee after lunch. He is a professor at the University of Wollongong. He has made the statement, and I have seen it made by other prominent economists, that the modelling has not been sufficiently released and they cannot come to conclusion because of that. My question is: would you allow people like Professor Ergas to have a look at your modelling?

Ms Quinn: You have raised Henry Ergas's statements in terms of the economic modelling.

Senator BOSWELL: No, I have not raised his statements. I raised the point that he has made about the modelling having not been released. I have not used any quotes.

Ms Quinn: Sure. I take issue with that statement that the modelling has not been released. There are hundreds of pages of details about the modelling that are in the public domain.

Senator BOSWELL: Absolutely.

Ms Quinn: So the results of the modelling have been released in a comprehensive and transparent way.

Senator BOSWELL: Would you—

Dr Gruen: Senator, could you let Ms Quinn answer the question without interruption?

Senator BOSWELL: I will let Ms Quinn answer the question but she obfuscates the question all the time. She is good at it, and good on her. That is what she is supposed to do. She is supposed to protect the government and she is doing it brilliantly. But, sitting on this side of the table, it does get a bit wearing. Proceed, Ms Quinn.

Ms Quinn: In relation to key assumptions that we have put in the public domain around various elements such as the marginal abatement cost curves, it does appear, despite putting transparent information in the public domain, that it is not always accurately interpreted. For example, Henry Ergas has made the statement that the marginal abatement cost curves are not costed, when in fact they are. He has also made statements about banking and borrowing and international assumptions and how that is going to significantly alter the assumptions. Those statements are also completely inaccurate representations of the modelling. He has also made statements that the restrictions on international permits as the government has announced are

significantly at odds with the Treasury modelling, which is also an incorrect statement. There are many incorrect statements in Henry Ergas's articles relating to publicly available information.

The models that Treasury has used are available publicly for people to use, so there is nothing to prevent people from picking up those models—as Frontier Economics has done—and making their own assumptions, drawing on the information available, to come up with different results. In that sense, Treasury is using publicly available information. We then draw on the expertise within Treasury and other organisations to come up with a comprehensive analysis about what we expect the impact of carbon pricing will be on the Australian economy.

Senator BOSWELL: I take from that that you would be willing to provide any information that Professor Ergas wanted. Is that your statement? You would make available to him—

Ms Quinn: We are more than happy to engage with people about the information that has been made public—

Senator BOSWELL: I know what 'engagement' means.

Ms Quinn: to clarify inaccuracies. We would be very happy for people to ask us questions to prevent inaccuracies being perpetrated, and that would be good for public debate. We are very open to answering questions that are put to us, as has been demonstrated through the many appearances before the Senate and other engagements with stakeholders. In terms of providing detailed information about the modelling, we have provided—

Senator BOSWELL: Please do not try to wind the clock down. I am trying to ask questions. You are trying to wind the clock down.

Ms Quinn: I am trying to answer your question. In providing information to the public domain, we have provided a comprehensive amount of information. Treasury does not own these models, so it is not possible for us to hand over someone else's model. These models are publicly available. They are purchased and available from organisations within Australia. There is nothing preventing people picking up these models and doing modelling if they have a desire to do so.

Senator BOSWELL: So, if Professor Ergas were to go with a cheque in his hand and say, 'I want the modelling and I am prepared to pay for it,' it would be available to him? Is that what you are saying?

Ms Quinn: He would be able to pay for the models used by Treasury and, yes, he would be able to receive those models.

Senator BOSWELL: Comprehensive models?

Ms Quinn: Yes, he would be able to obtain them from the providers of those models.

The theme was reprised later in the hearing:

CHAIR: I do not want to waste much time on it here. You have taken it on notice. The *Hansard* record will show that, from the beginning of our conversation, you said that some modelling was reflected in the government's report and that some other modelling results were not picked up in the government's report.

Dr Gruen: No, I did not say that.

CHAIR: Well, you did. You said: 'If all of the modelling results were reflected in the report, it would go to thousands of pages.' That is what you said.

Dr Gruen: Let me be completely clear. In the process of running these models, one runs them many, many times to get to a stage where one is comfortable with the

outcome, and the process of writing this up into a coherent report involves putting down the models and the results that make sense—

CHAIR: Make sense to whom?

Dr Gruen: To anyone. There isn't a modeller in the world who would, in the process of doing a 12-month modelling exercise—

.....

Ms Quinn: Just to clarify, modelling that we do for the government is advice that we provide to the government, whether that advice is a spreadsheet with a number or a table with some words in it. It is not the case that Treasury is able to provide all advice provided to the government to either the Senate or private individuals through the Freedom of Information Act.

CHAIR: The context of the question was about political—

Ms Quinn: To clarify, we work for the government. We provide a large amount of analysis for the government that they use as part of the cabinet process, as part of their deliberations and as part of policy processes. We have published information about the impact of the carbon price on the Australian economy reflecting the government's policies. We are updating that analysis to reflect elements we did not have time to complete, and that information has been made public. So it is not possible for us in the context to provide all the advice we provide to governments to this committee, and that will likely be the answer.

....

CHAIR: But not all the numbers were included in the report, and I want to know whether on notice you can provide us with all the numbers.

Ms Quinn: I am happy to take this on notice and be corrected, but my professional assessment would be that, as part of the drafting process, there was no reduction in the quantity of information in terms of the numbers in the report. The drafting suggestions were around changing words here and there and clarifying things. If you get a bunch of modellers writing a report, other people read it and ask questions and you clarify it.

CHAIR: Were all the Treasury modelling results included in the draft report or not?

Ms Quinn: The draft report put together a comprehensive story, so, no, not all the results that were done were in the draft.

CHAIR: Indeed. I am asking you to consider whether you can provide to us on notice that which was not included so that we can have the full picture. You may say no and you may say yes. I want to know whether you can assess that and provide it to us on notice.

Senator THISTLETHWAITE: Is the approach that has been taken in preparing this published report the same approach that Treasury has taken with previous governments of any political persuasion? When the *Intergenerational report* was compiled and when the published reports associated with the GST were compiled, was the process of Treasury's interaction with the government the same approach as has been taken on this occasion?

Dr Gruen: Yes, absolutely, and there is a—

CHAIR: The answer was yes; that is great.

Dr Gruen: Can I finish the answer, please?

CHAIR: You answered the question.

Dr Gruen: I will decide whether I have answered the question.

CHAIR: No, you will not decide whether you have answered the question.

Dr Gruen: Excuse me, I would like to give an answer which is the truth and is not misleading. Can I do that?

CHAIR: Dr Gruen, we now have 25 minutes left. You have answered the question.

Dr Gruen: You interrupted my answer. I would like to—

Senator THISTLETHWAITE: I would like to hear the answer, Chair, if I can.

CHAIR: It is now up to Senator Madigan to ask some questions.

Dr Gruen: Excuse me, I have not finished my answer. May I finish my answer or not?

CHAIR: Are you going to spend another 25 minutes providing us an answer?

Dr Gruen: No, I am not.

CHAIR: How long are you going to be?

Dr Gruen: I am going to be relatively quick, but it is not a single-word answer.

CHAIR: Okay then, go quickly.

Dr Gruen: Thank you. It is a little hard for me to keep my train of thought when I am being told that I am not allowed to answer the questions.

CHAIR: I think that you are bordering on—

Dr Gruen: The question was: is the approach we have used to writing a report and interacting with the government the same as it was in previous reports. The answer to that is: absolutely it is the same and the process involves trying things out and making judgments. There is a lot of toing and froing, not just with the government but with other experts. It is not a simple process where you know exactly where you are going. It is a process that takes time and, at the end, you try and write a coherent report that explains to the best of your professional ability what useful results you have found. At no time could you possibly put down everything.”¹⁷

The issue was taken up with Treasury again at the hearing on 23rd September 2011:

Senator CAMERON: So has any of the modelling that has been done or any of the questions that you have had in the numerous parliamentary inquiries that you have been involved in caused you to think that Treasury has got it wrong, that there is a problem with what we have done and that we need to reassess our fundamental analysis?

Ms Quinn: We certainly take on board the issues raised in the committees, particularly from stakeholders and individual companies who raise concerns and provide additional information in the public domain. We have certainly over the years taken on board that information and we have, in fact, between 2008 and 2011 had quite detailed conversations with various industries who had concerns about the analysis in 2008. We have worked through those concerns and taken on board the additional information that has been made available to us and have incorporated that information. We have taken on board changes in the economy, changes in technology options and different concerns people have raised about their particular industry that we may not have looked at in as much detail as they had. We have been very open to taking on board information that people have provided to us. We are very keen, if people have concerns, for them to raise them with us so that we can talk through those. Sometimes it is a matter of talking through what we have done so that people understand both sides of the issue and often there is no disagreement. There might appear to be disagreement at the start but often, through communication and discussion, things are clarified. We have not ignored any information that has been brought to us. We have always looked at it clearly, analysed it, asked questions and incorporated it where we can and where we think it is important.¹⁸

17 Proof Committee Hansard; 10th August 2011, pp35-36

18 Proof Committee Hansard; 23rd September 2011, p.13

Government Senators have listened carefully to these exchanges during the inquiry and considered carefully the responses provided by Treasury during some robust, but nonetheless legitimate testing of the modelling. We are satisfied that none of the at times robust attacks on Treasury's modelling have in any way cast doubt on its results. We are satisfied that the modelling exercise has been robust, has taken into account all relevant and necessary considerations and parameters and provides with a considerable degree of certainty the likely outcomes of the introduction of the carbon price mechanism adopted as policy by the government.

This stands in contrast to modelling released by the New South Wales Premier which was intended to cast doubt on the Commonwealth Treasury's modelling.

The modelling was conducted on behalf of the NSW government by Frontier Economics and stands as a case study in how modelling shouldn't be done if it is to withstand more scrutiny than the news cycle will normally allow. It and the subject of electricity prices generally was the subject of questions asked of Treasury at the public hearing held in Canberra on 10th August 2011.¹⁹

Frontier Economics completed modelling for the NSW Treasury on the impact of the carbon price, focusing on state, regional and sectoral effects. The modelling uses the Monash Multi-Regional Forecasting model (MMRF), one of the models used by the Treasury in the Strong Growth, Low Pollution: Modelling a Carbon Price (SGLP) report, adopting similar assumptions.

At an aggregate level, the Frontier Economics modelling endorses the Commonwealth Treasury report that shows carbon pricing will achieve deep cuts in emissions with only a modest effect on economic growth.

The NSW Treasury notes that the SGLP modelling is 'considered, rigorous and complex'. Frontier Economics notes that '[a]t an aggregate level, the modelling results in this report are broadly consistent with the Commonwealth Treasury modelling'.

Consistent with the findings in the SGLP report, the Frontier Economics modelling finds that carbon pricing will have a modest impact on Gross National Income with a reduction of around 0.5 percentage points in 2020 against business as usual.

The central claim of the modelling, that the economic impact to 2030 of carbon pricing will be larger on the NSW economy than on any other mainland state, is at odds with previous modelling that Frontier Economics has undertaken.

Previous analysis undertaken by Frontier Economics projected the impact of carbon pricing on NSW to be closer to the national average.

19 Proof Committee Hansard; 10th August 2011, pp11-12

Similarly, the new Frontier Economics modelling suggests that the largest negative impacts will be on the Tasmanian economy, when previous Frontier Economics modelling showed a positive impact from carbon pricing.

Frontier Economics suggests that the reduction in NSW gross state product due to carbon pricing will be 1.5 per cent in 2030, the greatest of any mainland state, while the SGLP modelling found a reduction of 1.0 per cent in 2030. The Frontier Economics analysis also includes sub-state regional results. However, the Australian Treasury does not consider this analysis sufficiently robust to provide insight into the effects of carbon pricing. Rigorously modelling the interplay between carbon pricing, industry growth, wages and employment growth at a regional level is not possible with the tools available.

Some of the regional results in the Frontier Economics report are difficult to reconcile, for example, the analysis finds that output in the Hunter Valley will grow by roughly 30 per cent over the decade to 2020 with carbon pricing, while finding at the same time employment declines. Frontier Economics say this is because productivity improvements outweigh output growth.

The Frontier Economics report shows that slower employment growth for some states and regions will be largely offset by faster employment growth in other states and regions.

The NSW Treasury report, which accompanies the release of the Frontier Economics report, claims that retail electricity prices will rise by around 15 per cent in 2012-13. NSW Treasury estimates are not based on electricity market modelling, but partial analysis of the impact of a carbon price on residential electricity prices. Further NSW Treasury estimates of the impact of carbon pricing on electricity prices in the range of 14 to 20 per cent are based on outdated analysis of the Carbon Pollution Reduction Scheme, and higher pass through rates of carbon prices into retail electricity prices than estimated in the latest Treasury modelling.

The high pass through rate used in the NSW Treasury analysis appears to indicate that electricity generators will be able to pass on between \$40 to \$60 for every \$23 tonne of carbon emitted. This very high rate of pass through appears inconsistent with NSW Treasury arguments around extremely low pass through rates impacting the asset values of NSW Government owned coal-fired electricity generators.

The SGLP modelling showed that electricity prices will rise with carbon pricing, but by around 10 per cent in the first year of the scheme with a \$23 carbon price, and that household assistance package will help households with the increase in the cost living. Attachment A contains further details of comparison between the modelling.

Government senators do not accept the results of the modelling undertaken by Frontier Economics. The Commonwealth Treasury modelling for the *Strong Growth, Low Pollution: Modelling a Carbon Price* (SGLP) report shows gross state product of

just 1.0 per cent below the base case in 2030, while Frontier Economics shows 1.5 per cent.

The Government has recognised that some industries and communities may be disproportionately affected in the transition to the carbon price. The Latrobe Valley was identified by the Garnaut Review as a region severely affected by national emissions reductions. Brown coal electricity generation is one of the most emissions-intensive industries in Australia and there may be limited opportunities for the employment of people who may be made redundant in the event of industry decline.

While the Hunter Valley is identified by some as being adversely affected, it is likely to face less severe impacts due to the ongoing strength of coal exports and other employment options.

The Government is implementing a range of measures to assist sectors and regions with the transition to a low pollution economy:

- providing free permits to emissions-intensive trade-exposed industries to guard against the risk of carbon leakage and to support jobs;
- providing direct assistance to the electricity generation industry of around \$5.5 billion in free permits;
- providing assistance worth over \$1.3 billion to the coal mining sector to support their transition to a carbon price; and
- the Government has also set aside \$200 million to provide support for communities and regions that experience acute impacts from the carbon price.

Modelling by the Commonwealth Treasury shows that NSW coal-fired generators will continue to supply electricity and operate profitably. This modelling also shows that some low emissions NSW Government owned generators benefit from the introduction of a carbon price through increased output and profitability.

Under the Clean Energy Package's Energy Security Fund, NSW Government generators will be eligible to apply for assistance to refinance existing debt and purchase future vintage carbon permits. The NSW Treasury's claim that NSW generators would not be eligible for this assistance is incorrect.

The NSW Treasury's claim that the carbon price will increase household electricity prices in NSW by around 15 per cent is based on partial analysis.

The Commonwealth Treasury's modelling estimates the carbon price will contribute to a 9 per cent increase in household electricity prices in NSW over 2013-17. This analysis is based on three different approaches - two specialist electricity sector consultants and an Australian Treasury model - all of which give consistent results.

The carbon price will be accompanied by an ongoing household assistance package worth \$14.9 billion over four years. Household assistance will be targeted to those

who need it the most and for millions of households; this assistance will outweigh the price impact of a carbon price, including its impact on electricity prices.

Chapter 5 - Treatment of small and medium enterprises

A common theme among small and medium sized enterprises (SMEs) providing evidence to the inquiry was their perceived inability to pass on, through increased prices, their increased costs due to higher energy bills in circumstances where the business is neither trade exposed nor emissions intensive.

For example, Geelong Galvanising, who gave evidence at a public hearing in Geelong, came to the inquiry with grave concerns about the future of its business under a carbon price mechanism.

The company expressed concerns about increased energy costs on its viability, citing imports of pre-galvanised steel items from China as its principal competition. The company indicated that galvanising and its associated processes is an energy-intensive business.

In an email sent to the Committee secretariat prior to the public hearing in Geelong, the company outlined its current annual energy costs, which were confirmed during the course of the hearing as follows:

Electricity:	\$100,000
Gas:	\$75,000
Diesel:	\$8,000

The company indicated it has an annual turnover of approximately \$11 million.

Treasury has modelled energy cost increases for electricity, gas and diesel at 10 per cent, 9 per cent and six cents per litre respectively.

This exchange during the hearing illustrates the issue and the confusion about whether increased energy costs of small and medium enterprises can be passed through.

Senator CAMERON: Let me come to this wealth destruction and the massive job losses. How much is the carbon tax going to increase the cost of you doing business? Have you done any analysis on that?

Mr Chaston: Do you want to break it down to gas or electricity or—

Senator CAMERON: Yes. I have done the breakdown on the figures.

Mr Chaston: Two cents a megawatt hour on electricity, so 25 per cent. I think it is \$1.18 a gigajoule in gas, which is another 20 to 25 per cent. It is 6c a litre for diesel. Online suppliers of chemicals is an unknown factor. We do not know how they are going to be affected. The paint and blast side of the business is of course going to go up because of the energy intensive way of—

Senator CAMERON: Just before you go on—I am happy for you to go through some more—let's come back to the big ones. In your submission you say that your annual turnover is \$11 million.

Mr Chaston: That is our plant alone, yes.

Senator CAMERON: Your electricity costs are \$100,000.

Mr Chaston: Yes.

Senator CAMERON: You have had significant increases in electricity over the last few years in Victoria, haven't you?

Mr Chaston: Yes.

Senator CAMERON: Not associated with the carbon price?

Mr Chaston: That is correct.

Senator CAMERON: According to Treasury, the carbon price would increase electricity costs by 10 per cent. Are you aware of that?

Mr Chaston: I have only got the figures that we put at a bit more than 20 to 25 per cent.

Senator CAMERON: Where do you get 20 to 25 per cent? Nobody else has got that figure.

Mr Chaston: It is based on 2c a kilowatt hour.

Senator CAMERON: Where do you get the 2c a kilowatt hour? Where does that come from?

Mr Chaston: There was a report put out by Ernst & Young dealing with the carbon tax for the next four years. I am sure you have read that.

Senator CAMERON: The Treasury say that the increase to electricity would be 10 per cent, so that is \$10,000.

CHAIR: In year one.

Senator CAMERON: \$10,000 per annum. Gas would go up nine per cent. That takes you from \$75,000 to \$81,000. If you use about 5½ thousand litres of diesel, which is about average for the \$8,000 that you say, it would be up 6c a litre. We agree with that. So the overall cost to you in terms of energy costs is about \$17,000 on a turnover of \$11 million. Is that correct?

Mr Chaston: There are other costs.

Senator CAMERON: That is 0.155 per cent of your turnover. Are you saying that, by increasing your costs by 0.155 per cent, that is destroying your wealth and there will be massive job losses at your company because of that?

Mr Chaston: Am I saying that?

Senator CAMERON: Yes. That was your submission.

Mr Chaston: That is what possibly could happen. I am hoping it won't.

Senator CAMERON: That could possibly happen by an increase of 0.155 percent. What agreements do you have with your employees in terms of wage increases?

Mr Chaston: They are on a workplace agreement.

Senator CAMERON: Yes, but what percentage increase is factored into that workplace agreement per annum?

Mr Chaston: The last one?

Senator CAMERON: Yes.

Mr Chaston: Over three years it was 10 per cent.

Senator CAMERON: So you have managed to deal with a three per cent per annum increase in wages, but you cannot deal with a 0.155 per cent increase in power. Why aren't these wage increases destroying jobs?

Mr Chaston: They are creating jobs because we are negotiating with that and we are increasing our competitiveness by up-skilling. Senator, you of all people know about productivity gains through wage negotiation and what you can do in the workplace—

Senator CAMERON: Yes, I know what some companies can do. I have to wind up here—the chair is winding me up—but the point that I just cannot understand is that

you have considered that you have to pass through an amount of 0.155 per cent to your customers. That is not going to destroy jobs in your company, is it?

Mr Chaston: I disagree with your percentage points and the increase in costs.²⁰

Government senators are of the view that a 0.155% increase in costs relative to turnover can be easily passed through to consumers. Indeed, it is the entire point of the household assistance package that these cost increases incurred by business that are neither emissions intensive nor trade exposed are passed through. It is not part of the design of the policy that they be absorbed by businesses concerned.

The Committee heard evidence from Inverell Freighters, a road transport company with a fleet of 25 prime movers based in northern New South Wales.

The company told the inquiry:

“I will now turn specifically to the carbon tax. As a company, we are very thankful that the tax on diesel has been deferred for three years. That is the proposal at this stage, as I understand it. In the current economic climate, three years is long-term planning for us, and that in itself is a problem. My concern in regard to the carbon tax is that, by its very nature, it is designed to inflict pain on us in order to make us change our ways and our patterns of use. This is the nub of the problem, and it is why I have a real problem with it. What can we as a company do? Absolutely nothing. If a carbon tax is imposed on us, we can do nothing. We are a sitting duck. We just pay the tax and try and pass it on.”²¹

The company told the inquiry that its diesel consumption is in the order of 400,000 litres per month and its annual turnover is approximately \$12 million. As the carbon price impact on diesel fuel will be six cents per litre, it will represent an increased cost of approximately \$288,000 per year from 2014-15 when the reduction in the fuel tax credit – an effective carbon price – is introduced. This represents 2.4% of the company's current turnover.

While this cost increase is higher than the energy cost increases to the galvanising business described above, government senators do not believe that a combination of passing through cost increases, fuel efficiency measures and greater use of fuels such as ethanol, biodiesel and renewable diesel, which will not incur an effective carbon price, will negatively affect the viability of businesses like Inverell Freighters and the employment they provide in regional areas.

What these examples point to is a need for SMEs to have access to information they require in order to make informed decisions about the future of their businesses. There is no doubt that the sheer volume of disinformation and misinformation about carbon pricing put into the public realm in recent times has had an impact on business' perceptions of their future. Hardly a day goes by without the Leader of the Opposition

20 Proof Committee Hansard, 1st September 2011, pp. 33-34

21 Mr. Keri Brown, Managing Director Inverell Freighters, Proof Committee Hansard, 3rd August 2011, p.1

appearing in a safety vest to proclaim the imminent demise of a business, industry, town or region somewhere around Australia.

The problem is that the disinformation and distortions have almost become internalised, self-evident truths among sections of the community, including some small and medium sized businesses. It would be unfortunate if, based on incorrect information such as the Ernst and Young report referred to by the Managing Director of Geelong Galvanising, businesses made business and investment decisions that prove to be adverse to their own interests.

This is borne out by part of the evidence provided to the inquiry by Namoi Bricks:

Senator THISTLETHWAITE: So in terms of the point you made earlier that you would be okay with everyone paying a little bit more on a level playing field—that is the way the scheme will operate, is it not? All your competitors will have increases in costs, but they will all pass them through. Consumers will have a bit of extra money in the hip pocket to spend to compensate for that. That is the best way to approach it, is it not?

Mr Broekman: It may seem to be but, at the end of the day, if we are still here today arguing about whether it is right or wrong or whether it is easy to understand or not, that still means it is too complex and it is too hard for us to make that assessment. If we had a system where the tax were just on, say, electricity, then it would be easier for businesses to manage, because then you would know exactly how much you are going to have to pay. You would be able to make those adjustments now and set your business model up. When we do not know what effects that carbon tax is going to have on all our inputs, we have to sit and wait until the bills start rolling in after 1 July 2012 before we can start making those assessments. We can only work on models and hope that those models are right.

Senator THISTLETHWAITE: I am hearing that you are not opposed to the scheme per se but that you would like a little more information about how it is going to operate and how it is going to affect your business.

Mr Broekman: Yes, I would like more information. No, I am not in favour of the scheme. Looking at the scheme and assessing the information that we are getting you can see that, especially once we move to a carbon trading scheme, there will be people in the middle who will be making money out of what should be going to the environment. That is what concerns many of us: the waste factor relating to the money that has been collected. What I am trying to say is that if we are going to collect a fund for the environment we want to see 95 per cent of that fund being directed to initiatives that are going to affect our carbon footprint.²²

For these reasons, government senators welcome the \$40 million program the government has announced to provide information to small business and community organisations that require assistance with assessing the impact of the carbon price mechanism on their operations and to assist with practical measures that they can take to reduce their energy costs.

22 Mr. Michael Broekman, Proprietor, Namoi Bricks; Proof Committee Hansard, 3rd August 2011, p.45

Grants will be provided to industry associations and non-government organisations that have established relationships with small business and community organisations. These organisations will develop and deliver relevant, tailored information that may be sector-specific information and recommendations on energy efficient processes and equipment, workshops and training courses on energy efficiency issues and provision of on-site energy efficiency advice.

Chapter 6 - Carbon pricing will generate long-term opportunities

Mackay Sugar is a 140 year old grower-owned raw sugar processor supplying approximately 20 per cent of Australia's raw sugar. It employs over 800 people during the crushing season and about 550 in the non-crushing season.

Mackay Sugar gave evidence to the inquiry at a public hearing in Mackay on 5th August.

Mackay Sugar told the inquiry they have done a preliminary analysis of the effects of a carbon pricing mechanism on their business. It is as well to set out the company's statement to the inquiry at some length as it sheds considerable light on the opportunities that a carbon price mechanism provides in the field of renewable energy and business diversification:

“Mackay Sugar has completed a preliminary assessment of the impact of the carbon price on our direct and indirect input costs. In particular, we have looked at emission permit liabilities, road freight costs, electricity and chemical costs. In the long run, the proposed carbon tax policy provides opportunities to Mackay Sugar. However, there will be a short-term cost impost flowing through our supply chain that we will not be able to pass on to our customers given that a large percentage of our product is exported. This impost will possibly be around 0.5 per cent of our annual revenue stream. Our business is unlikely to qualify for concessions available to emissions-intensive trade-exposed industries so we will be looking at the details of the clean energy fund for possible assistance as an eligible food processor. However, in the longer term, a carbon price is likely to promote diversification projects for our business. As a large sugar manufacturer, Mackay Sugar generates considerable quantities of renewable energy using by-products of the annual cane crop.

“The 20 petajoules of renewable energy produced and consumed each year in our three factories is equivalent to the energy contained in about 700,000 tonnes of coal. If Mackay Sugar derived its energy from fossil based fuels, like most businesses do, we would generate an extra 1.7 million tonnes of CO₂ each year. We receive no recognition for this effective carbon abatement. However, under the proposed carbon tax Mackay Sugar will be largely exempt from direct greenhouse gas emission liabilities. Also, a carbon price will drive our business to improve overall energy efficiencies and reduce the use of supplementary coal fuel at our factories.

“Mackay Sugar is currently constructing a \$120 million renewable cogeneration plant, which will supply about one-third of Mackay's electricity. The viability of this project was founded on the introduction of the Commonwealth government's 20 per cent renewable electricity target, the RET scheme. Our business future will be built around further renewable energy diversification projects, such as more cogeneration, molasses based fuel ethanol and second generation fuel ethanol. We have already invested in the Racecourse biocommodities research facility and we are part of the Queensland Sustainable Aviation Fuel Initiative, supported by the Queensland

government. Along with Virgin Airlines, Boeing and Qantas, we are looking at converting sugar into aviation fuel.

“While these projects will benefit from a well structured and firm carbon pricing policy that differentiates between renewable and fossil fuel based products, investment and renewable projects will also require the support of supplementary energy policies similar to the RET scheme. A carbon tax alone will not be sufficient to underpin further renewable energy projects within Mackay Sugar. In contrast to most businesses opposing any policy that would increase energy prices, the Australian sugar milling industry has been indirectly disadvantaged by low domestic energy prices. It might seem a bit bizarre but that is the case. Our main international competitors, such as Brazil, Thailand and India, which were mentioned this morning by cane growers, have very high domestic energy prices and they have invested heavily in renewable electricity generation and ethanol production to supplement their sugar revenue. This has not been possible in Australia, leading to a gradual erosion of our international competitiveness.

“The sugar industry has a large potential to contribute to Australia's renewable energy market. However, this will not materialise unless there are robust policies implemented. In qualifying Mackay Sugar's support for the carbon tax, we would like to highlight a few points. The exemption of primary producers—that is, our cane growers, who spoke to you this morning—from the carbon scheme will be critical to contain our whole-of-industry supply chain costs and therefore protect the viability of cane based renewable energy projects such as cogeneration and ethanol. Domestic sugar refiners provide a key value adding stream to the Australian sugar industry, and they typically do not have access to renewable fuels for their production purposes. Like raw sugar producers, it is recommended that these businesses receive concessions as food processors under the proposed clean technology fund.

“The sugar industry has significant potential to contribute to Australia's renewable energy targets by providing baseload electricity that does not go on and off as with wind and the sun—it is there 24/7—and access to funding under the proposed Clean Energy Finance Corporation would assist in underpinning these projects. The low domestic energy prices have eroded the national competitiveness of the Australian sugar milling industry by limiting diversification opportunities in Australia. While compensation has never been sought, this should be acknowledged and energy policy should be developed to promote the baseload renewable potential of the sugar industry.

“Finally, talking about fuel, the exclusion of fuel in some forms of transport in the proposed carbon tax scheme dilutes the benefits of the scheme and will be cumbersome to administer and police. Mackay Sugar welcomes the announced review of the fuel excise arrangements by the Productivity Commission and strongly supports an excise regime based explicitly on the carbon and energy contents of fuels. This is a structured and equitable way to effectively tax fuels and promote renewable fuel use while removing the complexity of rebates available to different fuel users.²³

Mackay Sugar's perspective is perhaps summed up in this exchange:

23 Mr. John Hodgson, Business Development Manager, Mackay Sugar; Proof Committee Hansard, 5th August 2011, p.45-46

Senator CAMERON: You indicated that the carbon price gives you a long-term opportunity. It seems to me that many of the submissions we have had here today are really looking at the short term and saying that it is all a big problem. They are not looking at the long term. Is short-termism a problem in this debate?

Mr Hodgson: Longer term we would certainly see a higher price on energy in Australia as being good for us in developing ethanol, biodiesel and electricity. That is going to take some time to happen. In the short term we will obviously wear an impost with the higher cost of fuels in particular and the emission liability that we will have at Racecourse mill with the refinery. We do see a short-term cost impost but a longer term benefit coming to us.

Senator CAMERON: You indicated that you will be largely exempt from any costs of the new tax, is that correct?

Mr Hodgson: Two of our mills will be exempt from permit liabilities, having to purchase and surrender permits every year. They will fall below the 25 kilotonne threshold for CO₂ emissions. Racecourse, where the refinery is located, will be above the threshold. That is where we will have the liability. But, as was mentioned before, most of that liability will be passed on to our joint venture partner.

Senator CAMERON: So a carbon tax is not a job destroyer for your industry, is it?

Mr Hodgson: No. We are currently building a \$120 million cogen plant. That was based on the 20 per cent renewable scheme. The carbon tax should enhance our revenue from cogeneration. We are hoping it will allow us to go ahead with another cogen project within another couple of years. Those projects typically employ about 250 people during the construction period and a dozen or so under operations.

Senator CAMERON: And you are in discussions about diversifying into aviation fuel as well?

Mr Hodgson: It is early days but we have joined a consortium, under the support of the Queensland government, with the University of Queensland to develop aviation biofuels from sugar. That will be another revenue stream. Again, the production of aviation biofuels from sugar will be more expensive than fuels from a fossil fuel base or from oil, so there will need to be incentives for those projects to happen.²⁴

Apart from representing Geelong Galvanising at the hearing in Geelong, Mr. Chaston appeared in his capacity as Vice-Chairman of the Galvanisers Association of Australia. Mr Chaston told the inquiry that a carbon price may provide opportunities in renewable energy construction projects:

Senator THISTLETHWAITE: Have you got projections for growth in the future?

Mr Chaston: I have never projected growth. I have always projected a status quo and if I get some growth, that is great.

Senator THISTLETHWAITE: Where do you sell most of your product? Which industries do you sell to?

Mr Chaston: The galvanising industry are involved with clean energy. We galvanise all the wind towers that are currently being put up around Port Campbell, Warrnambool and that area. Unfortunately, the government has just said that 80 per cent of Victoria now cannot have wind farms put on it, so that curtails any growth in that industry. We galvanise in the transport industry, the agriculture industry, the marine industry. If it is steel and you want it to last, we will galvanise it.

Senator THISTLETHWAITE: So you have had a substantial advantage for your firm from increased manufacturing of wind turbines?

Mr Chaston: Absolutely.

Senator THISTLETHWAITE: Under a carbon price, wind power becomes more competitive. We would like to think that there will be greater opportunities for production of wind turbines in Australia as a result of that. Won't that be an advantage for your company?

Mr Chaston: It would be an advantage for the galvanising industry not specifically for my company.²⁵

The approach of Mackay Sugar in taking a long term view of carbon pricing stands in contrast to what we would characterise as a particularly short-term view taken by many who made submissions to this inquiry. We endorse this view, which is not confined to businesses like Mackay Sugar, but is held among institutional investors whose views expressed to the inquiry we outline below.

We are firmly of the view that innovative businesses with a track record of capital investment such as Geelong Galvanising and many other businesses involved in the engineering and fabrication industries will be able to pursue opportunities such as those arising with western Victorian wind farm developments.

We note that the tenor of Mr. Chaston's evidence in relation to immediate threats to his business and other members of his association are cheap imports of fabricated, galvanised steel work – not a carbon price mechanism.

25 Mr. David Chaston, Proof Committee Hansard; 1st September 2011, p.17

Chapter 7 - Carbon price mechanism will bring long-term investment certainty and emissions intensive businesses cry wolf

Australian investors know that a carbon price mechanism is inevitable. But uncertainty about what form the price will take, though less now than in the past two to three years, is imposing real costs today. Uncertainty is the enemy of investment and job creation. Electricity generation investments are not being made because the future price of greenhouse emissions cannot be factored in. Jobs in emerging low emissions technologies and industries are not being created today because businesses and investors cannot be certain about the carbon price mechanism until legislation is passed. Delay is holding back the inevitable transformation of critical sectors of our economy and the cost of delay will only make it harder to make change later.

The Investor Group on Climate Change (IGCC) represents Australian institutional investors with funds under management of over \$600 billion. This amount is equivalent to about half of Australia's annual GDP.

Its members include AMP Capital Investors, Australian Super, BT Investment Management, Deutsche Bank Equity Research, Colonial First State, Perpetual, Goldman Sachs and UBS Investment Bank.

IGCC members invest in all sectors of the economy and have substantial ownership shares in many Australian companies; emissions-intensive and low-emissions alike.

In its submission to the inquiry²⁶ IGCC said:

“...we believe that addressing the risks of climate change and making adjustments to emissions intensive industry are long term economic issues that and policy action should not be delayed because of short-term volatility.”²⁷

The IGCC fleshed out this submission by making it clear that the greater cost of climate change is in delaying the introduction of a carbon price mechanism. They presented research conducted for IGCC by economic modelling firm SKM/MMA that found that delaying the start of a carbon price mechanism by just four years would lock in additional costs to the electricity sector of \$2.5 billion in the period to 2030. These costs would arise from:

- delaying the switch from coal to gas for base load generating capacity;
- less efficient electricity plant build, locking in additional economic costs of around \$500 million to 2030 and \$1 billion to 2050;
- additional emission costs of \$2 billion to the economy to 2030 (\$2.8 billion to 2050);

26 Investor Group on Climate Change, Submission No. 88

27 Ibid, p.1

- wholesale electricity price increases 19% (\$13/MWh) higher than would arise from early introduction of a carbon price.²⁸

Mr. Nathan Fabian, Chief Executive of the Investor Group on Climate Change gave evidence to the inquiry at a public hearing held in Canberra.

His opening statement to the inquiry, based on the long-term view of the investors his organisation represents, presents what government senators believe is a proper perspective on the impacts of the carbon price mechanism proposed by the government. We therefore set it out in full:

“IGCC is a group of investors of over \$600 billion of retirement savings and private investments on behalf of millions of Australians. We are wholesale and retail funds managers, super funds, investment researchers and advisers. We accept the mainstream science of climate change and, as prudent investment managers, must seek ways to prepare for the financial risks and economic shifts that responses to climate change will cause. We are deeply invested in the Australian economy, including in most of the companies that will pay the carbon price.

“We have closely examined the financial impact of the proposed carbon price on companies that we own, on the beneficiaries whose money we manage and on the economy generally. Our research indicates to us that there is only a modest financial impact on most Australian companies that will pay the carbon price; that there is a marginal impact associated with the carbon price on super fund balances; that there are in fact higher costs associated with delaying the introduction of a carbon price in Australia for both investors and electricity users, regardless of the policy actions chosen by other nations; and that there are clear investment signals that flow from a certain emissions reduction policy framework such as the proposed carbon price package.

“The first point, researched by analysts within our membership including Citi, Deutsche Bank and others and used by us to make investment decisions, indicates that there is no material short- to medium-term financial impact on any but a handful of ASX 200 companies. In fact, for 188 out of 200 companies the impact is less than one per cent of earnings in the early years. For investors who invest billions of dollars this is a marginal number and would not make us change our investment decisions in and of itself.

“On the second point, recent research on true cost by the Australian Institute of Superannuation Trustees indicated that the average financial impact of the carbon price on super fund balances was 0.8 per cent. Again, this is a relatively marginal cost—although, of course, when you are managing the money of others any cost needs to be managed. The prospect of this cost continuing to grow over time is enough to make super funds start to evaluate where their capital is flowing. Of course, we understand that reallocation of capital to less emissions-intensive activities is one of the objectives of the scheme.

“On the third point, research conducted for IGCC and Catholic Super by SKM MMA examined the costs of meeting the bipartisan target of minus five per cent by 2020. The research found that delaying only four years, to 2016, would in fact add costs for both electricity users and investors—and here it is important to make the point that this is assuming a target of minus five per cent. We accept that there is no cost-free way to reduce emissions. As such, the objective is to find ways to reduce that cost or keep it relatively low.

“Finally, it is our view that uncertainty over carbon pricing policy is materially impacting investment decisions in Australia, most obviously in electricity markets. A long-term carbon pricing framework that is transparent and certain in its design is the most appropriate way to address the uncertainty and get investment flowing again. While there are clear limitations on the efficiency of the proposed framework—for example, in the form of price ceilings and floors—there is sufficient certainty in the timing of transitions in the price arrangements for these to be transparent to the market. It is our view that delaying the introduction of a substantive framework to address emissions will perpetuate risk to the investment environment and discourage investment. Thank you, senators. I am happy to take your questions.”²⁹

Another of the perennials of debate about climate change and carbon pricing is the disconnect between what individual companies tell politicians and journalists about their financial prospects under a carbon price and what they tell markets and investors.

One of the things that have puzzled government senators during the course of this and earlier inquiries, has been the lack of continuous disclosure by companies in accordance with their obligations under the Corporations Act and ASX listing rules that mirrors the doom-laden predictions of the future they disclose to politicians and journalists.

A couple of examples arose during the course of this inquiry.

Rex Airlines is a regional airline operator formed in 2002 out of the collapse of Ansett and its subsidiaries Kendall and Hazleton. Rex gave evidence to the inquiry on 22nd July that its increased fuel costs would add a cost of about \$2 per passenger and expressed a view that this would be difficult to pass on through a moderate increase in ticket prices. Through the operation of various state government regulations, Rex enjoys a monopoly on about 60% of the routes it services.³⁰ The overall tenor of Rex's evidence was that the viability of a number of routes would be threatened and the airline may withdraw from some.

Regional Express Holdings released its full year results on 24th August 2011. In an accompanying media release that stated, “...Rex has solid fundamentals and outstanding financial performance even in the midst of these extremely challenging

29 Mr. Nathan Fabian, Chief Executive, Investor Group on Climate Change; Proof Committee Hansard, 23rd September 2011, p.25

30 Regional Express Holdings Ltd. market report, 24th November 2005; <http://www.rex.com.au/AboutRex/InvestorRelations/Rex%20report.pdf>, viewed 31st September 2011.

times. While the economic turmoil in the USA and Europe is as threatening as ever, at Rex we approach the new FY with a certain amount of confidence, serenity and excitement.”³¹

While we acknowledge Rex's concerns about fuel prices, we are of the view that volatile and rising world oil prices are more to be concerned about than the effects of a carbon price mechanism. This much is actually spelled out by the company in its 2011 results lodged with the ASX.³²

The Australian Coal Association, representing the black coal industry and some of the biggest mining companies on the planet has taken a typically bleak view of the future not only in this inquiry, but in the many inquiries to which it has made submissions. As described above, its approach has been a delay action, wait-and-see approach that the weight of evidence tells us is the wrong thing to do.

What is puzzling is the lack of any disclosure of this bleak future to be brought on by carbon pricing by the coal companies to investors or markets.

Anglo-American Metallurgical Coal gave evidence to the inquiry that:

“In summary, the government's proposed carbon-pricing mechanism has the potential to put the future of the Australian coal industry at risk. From Anglo American alone, Australians may lose \$4 billion worth of investment and forgo more than 3,200 jobs. It simply does not make sense to implement the proposed carbon-pricing mechanism and forgo the benefits of the coal industry for little or no environmental gain. This is especially the case when a better way in the form of a phased-in auctioning of permits could be implemented at a much lower cost and ensure both the future of the coal industry and the intended environmental outcome.”³³

Questioned by Senator Cameron, Mr. Barlow was unable to say whether Anglo American had made any disclosures to caution investors against the looming carbon price mechanism that would place at risk, not only investment and jobs, but presumably investors' money.³⁴

The company later responded to questions taken on notice that:

“Anglo American has not released any notices to investors. We have, however, responded to questions in line with our public statements to date. Anglo American has not lodged any stock exchange releases. Disclosure to date is responding to questions, and is entirely consistent with our public statements to date.”³⁵

31 Regional Express media release - “Rex Announces FY2011 Full year results”, 24th August 2011.

32 Rex Investor Briefing - Full Year Results FY2011, viewed at <http://www.asx.com.au/asxpdf/20110824/pdf/420lg7nqv1pns3.pdf> on 31st September 2011

33 Mr. Nicholas Barlow, Head of Resource Development and Operational Excellence, Anglo American Metallurgical Coal Pty. Ltd.; Proof Committee Hansard, 1st September 2011, p. 41

34 Ibid, pp 43-44.

35 Anglo American; Answer to question on notice received 13th September 2011.

While we understand perfectly the sensitivities of these things, in our view, this is a less than convincing answer to the question asked of it; essentially do the company's gloomy view of the effects of the carbon price expressed to politicians correspond with what they are telling the actual people whose money might be at risk. Frankly, the answer appears to be an equivocal 'no'.

Fortunately, the Investor Group on Climate Change was able to shed some light on this perennial inconsistency; in evidence given at the Canberra public hearing on 23rd September 2011.

Mr. Fabian was asked about it in the following questions:

Senator CAMERON: The discussion I had with Anglo American was on the basis of their opening statement, where they argued that the proposed carbon pricing mechanism would reduce the value of four new mines they were planning to open. They also indicated that the carbon price would mean that they would lose market share and the viability of their operations would be put at risk. They also indicated that it may mean that they would look to make investments in Mozambique, Mongolia and Indonesia instead of investing in Australia—basically, that the company was at risk in Australia. I asked whether they had made any statements to the stock exchange in relation to such a dreadful scenario for the company. Would you expect a company that was in such a bad position as they claim under the carbon tax to advise investors?

Mr Fabian: All companies have obligations to disclose to the market any material factors that would impact their earnings or position. So, as a matter of course, all companies should disclose anything that is material. So, yes.

Senator CAMERON: Are you aware of any mining company making disclosures either to the Australian Stock Exchange, the Johannesburg Stock Exchange or the London Stock Exchange about their companies being in severe difficulties because of the implementation of the carbon price?

Mr Fabian: No. We have studied announcements to the Australian Stock Exchange of emission-intensive companies specifically. Although a range of language is used to describe the impact on the company, I can say that none have indicated that there will be a severe financial impact on their operations, although some do specify a financial impact.

Senator CAMERON: So how then can we as parliamentarians balance the message they are sending to the Australian public and Senate inquiries when that message is not being replicated to investors anywhere in the world?

Mr Fabian: I think that is probably a difficult job for you. The information we get as investors is based on the sound financial projections of the company, and that is how we make our decisions. What companies do in the public domain is probably more related to how they want to be treated by governments in periods of policy transition with assistance than the underlying financial position of the company at that time.

Senator CAMERON: You are being diplomatic. Is that rent seeking?

Mr Fabian: As an owner of companies, it would be inappropriate for me to say that a company should not try to obtain good conditions for itself. That is in effect what we pay them to do as investors, but the information we get day to day reflects the actual financial position. We have observed differences I guess between some of the advocacy positions and some of the numbers that are flowing to us.

Senator CAMERON: So there is a difference in terms of the public perception about the impact on the mining industry and what the resource industry is saying publicly and what it is saying to investment analysts; is that correct?

Mr Fabian: I will give you an example. Our analysis based on company projections and our own calculations is that the Australian coal industry will grow roughly 20 per cent in terms of metallurgical coal exports over the next decade and roughly 27 per cent in terms of thermal coal. That is pretty attractive growth in the coal export sector. As a consequence of those projections, we do not have any concerns about the financial opportunity or stability of the companies we invest in that market.

Senator CAMERON: With the greatest respect, Mr Fabian, either you have got it wrong or Mr Nicholas Barlow, the Head of Resource Development and Operational Excellence at Anglo American Metallurgical Coal Pty Ltd, has got it wrong. I am trying to find out who has got it wrong. Mr Barlow said on 1 September to this committee:

“In summary, the government's proposed carbon-pricing mechanism has the potential to put the future of the Australian coal industry at risk.”

He has made a jump from Anglo American to the Australian coal industry. Why would an executive of Anglo American put that to a Senate committee if they are not putting that to investors? Is it true, or have you just got it wrong, that the coal industry is at risk?

Mr Fabian: We certainly hope and believe that we do not have it wrong. Our people are highly trained and exceptionally good at reading company fundamentals and financial performance, so we believe we have it right. I really cannot comment for the company specifically, but there is nothing from any of our analysis or any of the disclosures to the stock market that would indicate to us that any companies operating in the Australian coal market are under any stress or duress.

Senator CAMERON: So you would not be saying to any of your clients who you are giving investor advice to: 'Sell Australian mineral shares. Get out of gas. Get out of coal. Get out of minerals. It is a disaster there because of this carbon price'?

Mr Fabian: No, quite the opposite. We think there is good opportunity in the sector in this decade. Clearly, the export demand or the demand for our coal in regional markets is substantial and it will grow through the decade. I should say that one would assume that, if emissions are going to be reduced, eventually, possibly next decade, maybe some of the coal markets will change depending on the technology that is available to abate emissions; but, at the moment, it is a good growth story for Australia. Our investors are invested in it and, frankly, that is precisely the outcome we want in terms of policy arrangements.

Government senators think this evidence speaks for itself and requires no elaboration.

Chapter 8 - The Coalition's “direct action” is a policy for inaction or will blow the budget

While both the government and the opposition share a common target to reduce greenhouse gas emissions by 5% on 2000 levels by 2020 that is where any policy similarity ends. The Coalition released its “direct action” plan to reduce greenhouse gas emissions on 2nd February 2010. It proposes an Emissions Reduction Fund to support 140 Mt of abatement by 2020.

While the government's policy is for the introduction of a market-based carbon price mechanism with an explicit price and multiple buyers and sellers of abatement; “direct action” involves a off-market, implied price for abatement set by the government, only one seller of abatement – the government – and a non-market tender process where the executive government will determine where abatement will occur.

During the course of the inquiry, a number of witnesses were asked for their views on the efficacy of the Coalition's “direct action” policy. Most of the small to medium sized businesses who provided evidence to the inquiry were either unaware of the detail of “direct action” or felt that it was irrelevant to them because they would not be in a position to purchase abatement through the tender process.

Soil carbon is at the heart of the Coalition's policy target of a 5% reduction in CO₂ emissions by 2020. This is the same as the government's target. Soil carbon, including use of unproven biochar methods accounts for 60% of the Coalition's reduction target.

The policy mechanism is an Emissions Reduction Fund, from which a Coalition government will pay farmers to abate “up to” 85 million tonnes of emissions a year by 2020 to meet their emissions reduction target. The overall annual abatement to be paid for from the fund is 140 million tonnes by 2020. Soil carbon abatement represents 60% of the total.

According to the policy document, under The Coalition's direct action plan:

- The ERF will buy 'up to' 85 million tonnes of abatement per annum through soil carbon schemes.
- Farmers will be entitled to tender for all verified new additions in soil carbon beyond the commencement of the Fund.
- A Coalition government would commence this work by offering to purchase 10 million tonnes of CO₂ abatement through soil carbons for 2012-13.
- Submissions to the Coalition from farm groups support the potential for a minimum 150 million tonnes of CO₂ equivalent per annum to be captured in soil carbons by 2020 and beyond, with a payment to farmers of approximately \$10 per tonne of abatement.

Over the period to 2020, this means a Coalition government would pay farmers and others for “up to” 85 million tonnes of abatement through soil carbon, representing expenditure from the ERF over the period of the program of a little over \$850 million.

A 2010 CSIRO report, *Soil Carbon Sequestration Potential: A review for Australian agriculture* concluded:

“Nearly 90% of Australia’s agricultural land is devoted to low-to-medium intensity grazing of natural vegetation (Table 1). These lands are generally comprised of soil and/or climate conditions that are not suitable for more intensive agricultural practices and given these constraints are not likely to be able to store large quantities of SOC.

“Accurate monitoring and verification of soil C stock changes, due to the large and heterogeneous background levels are difficult and often prohibitively expensive (see Section 4). A large-scale monitoring and verification system for estimating SOC stock changes will depend on the level of stringency that a particular government or emissions trading scheme finds acceptable and this level may likely be based on the financial trade-off between the value of the C credits and the cost of the monitoring program (Smith 2004b). At the national scale, this system may take the form of robust modelling informed by detailed measurements in representative systems combined with verification of management practices and yields via reporting and remote sensing with some economic discounting to factor in verification uncertainty. (p.48)

“Overall, this review suggests that stemming the loss of SOC from current agricultural practices and at a minimum recapturing some fraction of the carbon lost from soils since initial land clearing is possible from a biophysical perspective. However, due to the complex web of factors that governs the C balance of any particular soil; quantitative predictions of SOC sequestration rates will likely always entail a large degree of uncertainty. Given that many mitigation options in the agricultural sector have numerous co-benefits in terms of food security, environmental sustainability and farm profitability, we believe that governmental policies that promote adoption of these best management practices should be pursued regardless of the final status of agricultural soils in any carbon pollution reduction scheme. (p.50)³⁶

The essential point the CSIRO makes is that here is a great deal of uncertainty over the effectiveness of soil carbon abatement. Based on the highly conditioned support the CSIRO gives to soil carbon as an effective abatement measure, the government buying abatement through soil carbon measures could well end up just being a case of throwing good money after bad.

In February 2010, Bloomberg New Energy Finance, a UK-based financial analyst outfit specialising in nuclear energy, CCS and renewable energy investment released

36 Jonathan Sanderman, Ryan Farquharson and Jeffrey Baldock, “Soil Carbon Sequestration Potential: A review for Australian agriculture”; CSIRO Land and Water, 2010: <http://www.csiro.au/resources/Soil-Carbon-Sequestration-Potential-Report.html>

an analysis of the relative merits of Direct Action and the then CPRS.³⁷ Its analysis was scathing about “direct action”, saying:

- the CPRS would cost less than the Coalition plan;
- the CPRS increased the number of low-cost abatement options by linking to international markets;
- the Coalition plan may not exploit some low-cost abatement options;
- the Coalition plan couldn’t be scaled up even for relatively modest targets above 5%; and
- the Coalition plan relies too heavily on soil carbon, especially given it is not currently included in greenhouse accounting. Worse, “by earmarking more than half of the ERF to farmers to increase soil carbon sequestration, the government has arguably already created a market distortion. While there is no doubt that carbon sequestration is an important and potentially low-cost abatement option, there are other low-cost options particularly in energy efficiency which would be excluded under this scheme.”

Bloomberg homed in on the voluntary mechanism by which the Coalition plan would operate, saying it would only drive the exploitation of “low-hanging fruit” when it came to abatement options:

“The semi-market approach suffers from being reliant on the subjective decisions of an expert body: with only the information submitted by applicants to go on, such a body can only hope to replicate the efficiency of decisions taken internally within companies.”

Bloomberg was particularly critical of “direct action” over the issue of scalability, dismissing the Coalition’s claims that the program will be flexible enough to accommodate higher targets:

“While there is some flexibility to scale up direct financing of abatement activity in the short term, it is probably unrealistic to expect that the government will continue to purchase emissions reductions after the majority of low-hanging fruit is exhausted and more costly abatement is required to achieve deep cuts in emissions through 2020 and beyond. A direct-action policy may thus be a 10-year policy at best.”

Bloomberg's analysis was reflected in the view expressed by Treasury in relation to “direct action”:

Senator CAMERON—Dr Parkinson, again I want to come to this comparison that I started on carbon price and direct action. The theory I have heard about investments is that the carbon price gives long-term investment certainty, but direct action means that there is no investment certainty. Would that be a fair analysis?

Dr Parkinson—Yes, that is a fair analysis. Putting in place a carbon price mechanism, and in particular ultimately putting in place an emissions trading scheme,

37 Bloomberg New Energy Finance, “The Coalition offers its alternative to the CPRS, but it needs to come up with something better and get the numbers right”; Carbon Markets – Australia – Research Note, 8th February 2010

you have a framework, people can make investment decisions and they have the capacity to have instruments that hedge their risk. In the event of a direct action program, essentially they are being subsidised on particular activities by the government. Ultimately there will be a question of whether or not the government is able to identify the cheapest abatement and is able or willing to subsidise to the extent necessary to reach the target. As a result, if you really believe that ultimately we are going to go for deeper cuts than the direct action program could deliver at the moment, you would have to address the question of could the direct action program be scaled up sufficiently. As soon as you are into that space, you are back into the material that was released that we had provided last year, which was that we did not believe the direct action program could be scaled. Ultimately those subsidies have to be paid for by someone, which means that either we have to raise taxes or we have to cut expenditure.³⁸

One of the most serious flaws in “direct action” is that while it has the potential to lead to increased taxes to fund it, or alternatively higher interest rates as the government borrows to fund its ballooning cost, it offers no compensation to households for the increased costs they would face under either of these scenarios. Treasury offered this view of the compensation issue:

Senator CAMERON—..... A carbon price leaves the potential to assist households in relation to dealing with global warming, but Direct Action does not provide household assistance, does it?

Dr Parkinson—No, it does not. Ultimately, it depends on the form Direct Action might take. For example, let’s say we replaced a brown coal fired electricity generator with a gas one. If Direct Action simply provided a capital subsidy to make the investment cost—the capital cost—the same and did not address any differential in operating costs, then you could not be sure that you had not imposed a cost on the end consumer. The Direct Action scheme does not raise money to be used for compensation, but of course it is up to the government of the day if it wanted to pursue that. It is an option to pay for that out of consolidated revenue.³⁹

The Investor Group on Climate Change, representing Australian investors with \$600 billion in funds under management was asked during the inquiry about its view of “direct action”, particularly whether it could achieve its abatement targets and whether it provided a sufficiently long-lived policy framework to provide investment certainty. They told the inquiry:

Senator CAMERON:.....There is an alternative out there and that is the so-called direct action policy. What is your group's analysis of direct action versus the market approach?

Mr Fabian: We have concerns. Our preference for any policy framework in this area is that it is transparent, long-term and relatively certain. We are concerned that a policy that relies on governments primarily to either regulate or make payments to industry is vulnerable. For the long-term it is not sustainable simply because of the cost that is likely to be incurred in that scheme and also because the environmental outcome in terms of reducing emissions to any target is unlikely to be met. If that

38 Dr. Martin Parkinson, Secretary, Treasury; Proof Committee Hansard, 24th March 2011, p.26

39 Dr. Martin Parkinson, Secretary, Treasury; Proof Committee Hansard, 24th March 2011, p.27

uncertainty exists around the policy, it is probably going to change and it is probably going to change in the not-too-distant future. That creates investment risk and uncertainty for us and so we are not generally favourable on these kinds of policy frameworks in the absence of carbon pricing.

Senator CAMERON: Do you agree with Malcolm Turnbull's analysis that the best thing about direct action is that you can wrap it up pretty quickly?

Mr Fabian: An interesting question. My view is that you cannot meet substantial emissions reductions on governments' balance sheets, especially in this phase of the global economy. So whether or not it is intended to be wrapped up early, we think it is not sustainable.

Senator CAMERON: You have had a close look at it, I suppose.

Mr Fabian: Yes.

Senator CAMERON: We have had company after company give us evidence and I have asked the specific question to them: what is the impact of the direct action policy on the individual company? I will not put words in their mouths but they have all said: 'We haven't paid much attention to it'. We don't think it is the way to go.' Or they have dodged the question. If you use direct action to try to reach the shared reduction that both the government and the coalition have in terms of a five per cent reduction on 2000 emissions by 2020, do you think that is achievable under direct action?

Mr Fabian: No, we do not, Senator. The issue we see is that, if you pay some companies in the economy to reduce emissions, you are not necessarily impacting the emissions of other companies and so it is possible that emissions will grow enormously from sectors that are not touched by the direct action scheme, and that of course is the benefit, alternatively, of a pricing scheme that includes most sectors of the economy that they are covered. So, frankly, we are talking about a decade in which targets at some point are going to get steeper and deeper. It may not be steeper and deeper for 2020 but they are going to be in the next decade. The UK experience gives us an example of that, and so we need a framework that can adjust to the reality of having to reduce emissions substantially. As I have said, we do not believe a policy based on governments paying for abatement is a sensible long-term framework.

Senator CAMERON: The other argument that has been put to the committee is that the direct action scheme is market based. Given that you are operating in the market, what is your analysis of that statement?

Mr Fabian: Most markets have multiple buyers and multiple sellers. In fact, that is how good markets work. Markets where there is a constraint of market power, like only one seller, do not necessarily drive the behaviours that you would expect of a market, like people competing to do things for the lowest cost. So we would not consider an arrangement where tenders were put and decided by governments behind closed doors around what abatement will be paid for to be a very transparent arrangement. It is a single buyer of abatement from multiple sellers, so we would not really consider that to be a market mechanism.⁴⁰

In a Treasury Executive Minute released under Freedom of Information⁴¹ on 2nd September 2011, the costs of "direct action" become clear.

40 Proof Committee Hansard, 23rd September 2011, pp 29-30

41 "Economic and Fiscal Impacts of the Coalition's Direct Action Plan", Treasury Executive Minute, 14th July 2011;
http://www.treasury.gov.au/documents/2149/PDF/TEM_coalitions_direct_action_plan.pdf

The Treasury analysis states that the economic costs of Direct Action would be higher for two reasons: first, direct domestic action would forego opportunities for cheaper, internationally sourced abatement and second, direct action programs are generally less effective at driving take up of all potential abatement opportunities.

“Direct action” does not allow for emissions reduction through sourcing abatement internationally through the Clean Development Mechanism.

Treasury's modelling for the government's carbon price mechanism shows that, “a carbon price in 2010 dollars of around \$62 per tonne would be required to meet the abatement task of 159 million tonnes in 2020 using only domestic abatement, compared with \$29 per tonne in the core policy scenario with international linking.”⁴²

The economic cost will almost certainly be larger because “direct action” will be a far less efficient abatement mechanism than a market-based carbon price mechanism.

The Treasury Minute continues:

“Based on DCCEE analysis, the funding committed under the Direct Action plan (\$1.2 billion per year on average through to 2020) could not purchase sufficient domestic abatement to meet Australia's bipartisan emissions reduction target of a 5 per cent cut in emissions compared with 2000 levels, which would require 159 Mt CO₂-e of abatement in 2020.

“Previous analysis from DCCEE estimates that it is unlikely that the Direct Action plan could secure more than around 40 Mt in 2020.

“In particular, the Coalition policy of directly funding abatement would mean that no price signal would flow to consumers to drive demand side abatement. SGLP shows that demand side abatement accounted for half of electricity sector abatement to 2020.”⁴³

This analysis is entirely consistent with the advice we've seen from leading economic institutions like the IMF, OECD, Productivity Commission and others.⁴⁴

Direct action is funded entirely on Budget, using taxpayer funds to pay polluters to lower their pollution. In contrast, a carbon price is paid by greenhouse gas emitters. It

42 Ibid, p.1

43 Ibid, pp.3-4

44 For example - Productivity Commission, *What Role for Policies to Supplement an Emissions Trading Scheme?: Productivity Commission Submission to the Garnaut Climate Change Review*, May 2008. Centre for International Economics (CIE), *Review of the proposed CPRS*, prepared for the Menzies Research Centre, April 2009. Ross Garnaut, *Update Paper 6: Carbon Pricing and Reducing Australia's Emissions*, March 2011. Resources for the Future and the National Energy Policy Institute, *Toward a New National Energy Policy: Assessing the Options*, Washington, DC: Resources for the Future, 2010. HM Treasury, *The Economics of Climate Change: The Stern Review*, Cambridge University Press, 2007. Productivity Commission, *Carbon Emission Policies in Key Economies*, Research Report, June 2011.

raises revenue and this will be used to assist householders, support jobs and invest in climate change programs.

The Coalition's scheme will cost the Budget at least \$48 billion to 2020, almost 5 times the stated cost of the Coalition policy. This would mean that the average Australian household will have to pay an extra \$1,300 in taxes.

This is likely to be an underestimate, as it assumes that the cost to the Budget of each tonne of abatement would be the same as the carbon price. The Treasury explains that much of the abatement funded under Direct Action would happen anyway, resulting in a more expensive cost per tonne of real abatement. This is in addition to the inefficiency of grant-based tenders compared to the price signal generated by a market mechanism such as a carbon price.

The Treasury also dispels the argument that Direct Action could deliver abatement at a price below the carbon price by paying different prices for different abatement activities. The Treasury finds that this is impractical because businesses have more information about costs of abatement and are likely to bid strategically. This finding is backed up by detailed analysis by the Department of Climate Change and Energy Efficiency.

For example, if the Coalition were in Government, farmers would know that Mr Abbott would be paying for abatement in other sectors at \$40 or \$50 a tonne for example, and so would have no incentive to sell soil carbon abatement for \$8 a tonne (the price assumed by the Coalition).

This is borne out in practice in multi-round environmental tenders in Australia and internationally, where bids quickly converged close to the highest expected bid from previous rounds. So the Coalition's scheme is based on ripping off farmers and would not work in any case because it is based on an unrealistic and naive market assumption.

It is hard to imagine that a Coalition government, even one led by Tony Abbott, could be so fiscally irresponsible to pursue "direct action" in the event they are elected to government. So the only prudent course of action would be to jettison the policy altogether. The only conclusion government senators can come to is that the policy is a sham. It is a fig leaf over their determined position to do nothing about climate change. The Coalition's stated commitment to a 5 per cent emissions reduction target is a fiction. Should they ever be elected to government, the target and "direct action" along with it will be dumped, and the Coalition will return to the position they have been comfortable with for years; doing nothing. The Coalition is either fiscally irresponsible or cynical.

The question is; which one is it?

SENATOR DOUG CAMERON
DEPUTY CHAIR

SENATOR MATT THISTLETHWAITE

Government Senators' Dissenting Report: Appendix A

Carbon Price Mechanism Architecture

This inquiry began its public hearings in March 2011. On July 11, 2011, the government released the details of the carbon price mechanism including the starting price, a transition to an emissions trading scheme, household and industry assistance, employment support, support for agricultural businesses and programs supporting innovation in new technology, energy efficiency and related measures.

This section sets out in detail the architecture of the carbon price mechanism agreed to by the Multi-Party Climate Change Committee.

Starting price and fixed price period

The carbon pricing mechanism will commence on 1 July 2012. There will be a three year fixed price period.

The carbon price will start at \$23.00 per tonne in 2012-13 and will be \$24.15 in 2013-14 and \$25.40 in 2014-15. The prices in the second and third year reflect a 2.5 per cent rise in real terms allowing for 2.5 per cent inflation per year (the midpoint of the Reserve Bank of Australia's target range).

Liable entities will be able to purchase permits from the Government at the fixed price, up to the number of their emissions for the compliance year. Any permits purchased at the fixed price will be automatically surrendered and cannot be traded or banked for future use. Permits freely allocated may be either surrendered or traded until the true-up date for the compliance year in which they were issued. They cannot be banked for use in a future compliance year.

The holders of freely allocated permits will be able to sell them to the Government from 1 September of the compliance year in which they were issued until 1 February of the following compliance year.

The price paid by the Government will be equal to the price of the fixed price permits for that year, discounted to 15 June of the compliance year by the latest available Reserve Bank of Australia index of the BBB corporate bond rate, so that the buy-back price reflects the present market value of the permit. From 15 June onwards, the price paid will be equal to the fixed-price permits for that vintage.

Transition arrangements and setting pollution caps

The carbon pricing mechanism will transition to a flexible price cap-and-trade emissions trading scheme on 1 July 2015.

The Government will announce the first five years of caps in the 2014 Budget and will be required to table regulations setting five years of pollution caps in the Parliament no later than 31 May 2014.

The pollution cap will be extended by one year every year in regulations from 2015-16 to maintain five years of known caps at any given time. For example, in 2015-16, regulations will be made setting the pollution cap for 2020-21. In 2016-17, regulations will be made setting the pollution cap for 2021-22, and so on.

When setting pollution caps, the Government must consider Australia's international climate change obligations and the recommendations on pollution caps made by the Climate Change Authority.

The Government would also have regard to:

- the medium- and long-term national emissions reduction targets;
- progress toward emissions reductions;
- estimates of the global emissions budget;
- the economic and social implications associated with various pollution caps, including implications of the carbon price;
- voluntary action to reduce Australia's greenhouse gas emissions;
- estimates of the greenhouse gas emissions that are not covered by the carbon pricing mechanism;
- any past or planned government purchases of international units;
- the extent of non-compliance under the carbon pricing mechanism; and
- other matters (if any) the responsible Minister considers relevant.

In the event that the Parliament disallows the regulations presented in 2014, the legislation will provide for a default pollution cap that will ensure that covered emissions are reduced in absolute terms each year by a specified amount, expressed in million tonnes of CO₂-e, at least consistent with meeting Australia's unconditional pollution reduction target of reducing pollution by 5 per cent below 2000 levels by 2020.

Following this, each year the Government will be required to make regulations setting the next five years of pollution caps. If the Parliament disallows these regulations, then the legislation would provide for a default pollution cap for each year until regulations setting the next five years of pollution caps are made and not disallowed.

If, after the initial regulations setting five years of pollution caps have been made, the Parliament rejects the regulations setting the pollution cap for the sixth or any subsequent year of the flexible price period, the legislation will provide a default pollution cap for that year that would ensure that emissions are reduced in absolute terms each year by a specified amount, expressed in million tonnes of CO₂-e at least consistent with the annual reduction in emissions implied by the 5 per cent emissions reduction target.

Flexible price architecture

A price ceiling will apply for the first three years of the flexible price period. The price ceiling will be set in regulations by 31 May 2014 at \$20 above the expected international price for 2015-16 and will rise by 5 per cent in real terms each year.

If the world is on a 450 parts per million carbon dioxide equivalent (CO₂-e) trajectory or higher, this will be reflected in international prices and the price ceiling will automatically be \$20 above this price. The level of the international price will be examined closer to the point of transition to a flexible price period to ensure that the price ceiling reflects a \$20 margin above its expected level.

A price floor will apply for the first three years of the flexible price period. The price floor will start at \$15 and rise at 4 per cent in real terms each year.

Unlimited banking of permits will be allowed in the flexible price period. There will be limited borrowing of permits such that, in any particular compliance year, a liable entity can surrender permits from the following vintage year to discharge up to 5 per cent of their liability.

Permits will be allocated by auctioning, taking into account transitional assistance provisions for key sectors. The policies, procedures and rules for auctioning will be set out in a legislative instrument. The Government will advance auction future vintage permits. There will be advance auctions of flexible price permits in the fixed price period. There will be no double-sided auctions. There will be no deferred payment arrangements for auctions.

Coverage and liable entities

The carbon pricing mechanism will have broad coverage of emission sources from commencement, encompassing: stationary energy; industrial processes; fugitive emissions (other than from decommissioned coal mines); and emissions from non-legacy waste. An equivalent carbon price will be applied through separate legislation to some business transport emissions, non-transport use of liquid and gaseous fuels, and synthetic greenhouse gases.

Agricultural and land sector emissions will not be covered.

Emissions from the combustion of biofuels and biomass, including CO₂-e emissions from combustion of methane from landfill facilities, will not be covered.

The carbon pricing mechanism will cover four of the six greenhouse gases counted under the Kyoto Protocol — carbon dioxide, methane, nitrous oxide and perfluorocarbons from aluminium smelting.

High global warming potential synthetic greenhouse gases (with the exception of perfluorocarbons from aluminium smelting) will not be included in the carbon pricing mechanism but will be subject to an equivalent carbon price using existing import and manufacture levies under the Ozone Protection and Synthetic Greenhouse Gas Management legislation. Levies will be adjusted annually to reflect the prevailing carbon price. From 1 July 2013, incentives will be provided for destruction of waste synthetic greenhouse gases, including ozone depleting substances, recovered at end of life.

In general, a threshold of 25,000 tonnes of CO₂-e will apply for determining whether a facility will be covered by the carbon pricing mechanism. All scope 1 (direct) emissions covered by the carbon pricing mechanism, and legacy waste emissions, will count towards thresholds, but not scope 1 emissions from fuels or other sources excluded from the carbon pricing mechanism.

Landfill facilities will not be liable for emissions that arise from waste deposited prior to 1 July 2012, but those emissions will count towards facility thresholds. To avoid waste displacement from covered to non-covered landfill facilities, an additional threshold of 10,000 tonnes of CO₂-e will apply to landfill facilities within a prescribed distance of large landfill facilities.

Natural gas retailers will be responsible for emissions from the use of natural gas by their customers. There will be flexibility for large facilities that purchase natural gas from a retailer to assume responsibility for emissions from their use of natural gas. Where natural gas is not supplied by a retailer, emissions from that natural gas will count towards the liability of covered facilities. Where the gas is not used at a covered facility, the owner of the gas will be the liable entity. Natural gas retailers will be responsible for emissions from the use of natural gas by their customers. There will be flexibility for large facilities that purchase natural gas from a retailer to assume responsibility for emissions from their use of natural gas. Where natural gas is not supplied by a retailer, emissions from that natural gas will count towards the liability of covered facilities. Where the gas is not used at a covered facility, the owner of the gas will be the liable entity.

An obligation transfer number (OTN) mechanism will provide for the voluntary transfer of carbon price liability from natural gas retailers to large natural gas users in prescribed circumstances. In general, large users of natural gas will be permitted to quote an OTN to their supplier to assume liability for their own emissions. Businesses that use natural gas as a feedstock will also be able to quote an OTN in order to avoid paying the carbon price on natural gas that does not result in emissions.

OTN quotation and acceptance will in general be voluntary. However, as a transitional arrangement, retailers will be required to accept an OTN quotation where natural gas is supplied under a contract entered into before the Royal Assent to the legislation and where the natural gas is to be used as a feedstock or where more than 25,000 tonnes of CO₂-e per year are attributable to the natural gas supplied under those contracts.

The liable entity for direct emissions from a facility will generally be the person with operational control over that facility (that is, authority to introduce and implement any or all of the operating, health and safety, and environmental policies for that facility).

Where a facility is operated by an Unincorporated Joint Venture and no one person has operational control over the facility, the emissions liability for that facility will instead be allocated between the joint venture participants in proportion to their interest in the facility.

The operator of a facility will be able to apply for a liability transfer certificate to transfer liability for emissions from that facility to:

- another member of its corporate group;
- a person outside of its corporate group that has financial control over the facility; or
- Unincorporated Joint Venture participants in proportion to their interest in the facility where the facility is operated for the Unincorporated Joint Venture.

Treatment of Transport

Light commercial vehicles (vehicles 4.5 tonnes or less gross vehicle mass) and households will not face a carbon price on the fuel they use for transport. In addition, the agriculture, forestry and fishery industries will not pay a carbon price on their fuel use.

Other business transport emissions from liquid fuels (rail and shipping) and non-transport emissions from businesses using liquid fuels will be subject to an equivalent carbon price, generally applied by reducing business fuel tax credits by an amount equivalent to that of placing the carbon price on liquid fuel emissions. Fuel tax credit reductions will apply to fuels acquired after 1 July 2012.

On-road transport use of Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG) and Liquefied Petroleum Gas (LPG) (such as freight transport) will not face a fuel tax credit reduction due to the imposition of the Road User Charge. Off-road transport use of these fuels (such as on a mine site) will face a reduction in fuel tax credits equivalent to placing the carbon price on emissions from that fuel use.

Non-transport use of CNG, LNG and LPG currently benefit from an automatic remission of excise. This will be replaced by a partial remission to reflect the effective carbon price.

Ethanol, biodiesel and renewable diesel will not incur fuel tax credit reductions or changes to excise as these fuels are zero rated under international carbon accounting rules.

As fuel tax credits are not available for aviation fuels, domestic aviation fuel excise will be increased by an amount equivalent to the effect of placing the carbon price on

aviation fuel in order to provide an effective carbon price for aviation. Changes to aviation excise will apply to fuels acquired after 1 July 2012. The additional revenue from increasing aviation excise by an amount equivalent to the carbon price will not be appropriated to the Civil Aviation Safety Authority.

International aviation fuel use will not be covered as this is subject to international negotiations.

Changes to fuel tax credits and excise to reflect the carbon price will be based on the specific emissions intensities of CNG, LNG, LPG, aviation gasoline, aviation kerosene, petrol and diesel, with all other liquid fossil fuels based on the diesel emission rate. Adjustments to credits and excise will be annual during the fixed price phase and every 6 months (based on the average carbon price over the previous six months) during the flexible price phase.

The Productivity Commission will conduct a review of fuel excise arrangements, including an examination of the merits of a regime based explicitly and precisely on the carbon and energy content of fuels.

Compliance

The domestic unit for compliance with the carbon pricing mechanism will be the 'carbon permit'. Each carbon permit will correspond to one tonne of greenhouse gas emissions.

The creation of equitable interests in carbon permits will be permitted, as will taking security over them.

In addition, carbon permits will:

- be personal property;
- be regulated as financial products;
- be transferable (other than those issued under the fixed price or any price ceiling arrangements);
- have a unique identification number and will be marked with the first year in which they can be validly surrendered ('vintage year');
- not have an expiry date; and
- be represented by an electronic entry in Australia's National Registry of Emissions Units.

The compliance year is the Australian financial year, from 1 July to 30 June.

To discharge their emissions obligations liable entities will be able to surrender an eligible emissions unit for each tonne of emissions for which they are liable during the compliance year.

During the fixed price period, most liable entities will be required to discharge their emissions obligations in two parts:

- a ‘progressive’ surrender obligation of 75 per cent of their emissions obligation by 15 June of the relevant compliance year; and
- a ‘true up’ (surrender) for the remainder of the obligation by 1 February following the compliance year.

This approach is similar to payment arrangements used for corporate taxes and allows time for entities to finalise annual emissions reports before making a final surrender of carbon permits.

A progressive surrender obligation will not apply for direct emissions in respect of:

- a facility that reported emissions of less than 35 kilotonnes CO₂-e in its previous year’s National Greenhouse Emissions Reporting System (NGERS) report, or was not required to provide an NGERS report in the previous year; or
- a facility that is expected to have emissions of less than 35 kilotonnes CO₂-e in the current compliance year.

In these circumstances, there will be a single date for meeting emissions obligations, which will be the ‘true up’ date of 1 February.

During the flexible price period, emissions obligations for each compliance year must be met by 1 February following the compliance year.

Emissions obligations that are not met through the surrender of eligible emissions units will need to be met by paying an emissions charge.

During the fixed price period, the emissions charge for the progressive surrender obligation and ‘true up’ (surrender) will be 1.3 times the fixed price for permits (that is, \$29.90 for 2012-13, \$31.40 for 2013-14 and \$33.00 for 2014-15). The emissions charge for any shortfall for a compliance year in the flexible price period will be double the average price of permits for that year. The emissions charge will apply for each tonne of greenhouse gas emissions (carbon dioxide equivalent) for which an eligible emissions unit has not been surrendered.

Eligibility of units from the Carbon Farming Initiative (CFI)

Australian carbon credit units (ACCUs) issued under the CFI will be eligible for compliance under the carbon pricing mechanism if they are:

- Kyoto compliant Australian carbon credit units (Kyoto ACCUs);
- non-Kyoto compliant Australian carbon credit units (non-Kyoto ACCUs) derived from emissions sources and sinks that would have been credited with a Kyoto ACCU if the abatement had occurred before the end of the relevant accounting period for the Kyoto Protocol first commitment period (31

December 2012 for reforestation and avoided deforestation activities, or 30 June 2012 for all other activities); or

- any other type of ACCU prescribed in regulations.

In the fixed price period, liable entities may surrender eligible ACCUs totalling no more than 5 per cent of their obligation. In the flexible price period, there will be no limit on the surrender of ACCUs.

CFI units will be bankable for future use. CFI units will be able to be exported during both the fixed price period and the flexible price period.

International linking

The use of international units to meet carbon pricing mechanism liabilities will not be permitted in the fixed price period. Export of domestic permits will not be permitted in the fixed price period (with the exception of Kyoto ACCUs).

International units can be used to meet carbon pricing mechanism liabilities in the flexible price period, subject to certain qualitative and quantitative restrictions (discussed below).

Export of domestic permits (with the exception of Kyoto ACCUs) will not be permitted in the flexible price period while a domestic price ceiling is in place, except as part of a bilateral link to another emissions trading scheme with appropriate provisions in place to maintain the environmental integrity of the linked schemes. Unrestricted export of units will be permitted when there is no longer a domestic price ceiling in place.

Until 2020, liable parties must meet at least 50 per cent of their annual liability with domestic permits or credits. This restriction will be reviewed by the Climate Change Authority in 2016.

The following international units will be included in the legislation establishing the carbon pricing mechanism:

- certified emission reductions (CERs) from Clean Development Mechanism projects under the Kyoto Protocol, other than temporary CERs, long-term CERs, and CERs from nuclear projects, the destruction of trifluoromethane, the destruction of nitrous oxide from adipic acid plants or from large-scale hydro-electric projects not consistent with criteria adopted by the EU (based on the World Commission on Dams guidelines);
- emission reduction units (ERUs) from Joint Implementation projects under the Kyoto Protocol, other than ERUs from nuclear projects, the destruction of trifluoromethane, the destruction of nitrous oxide from adipic acid plants or from large-scale hydro-electric projects not consistent with criteria adopted by the European Union (EU) (based on the World Commission on Dams guidelines);

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- removal units (RMUs) issued by a Kyoto Protocol country on the basis of land use, land-use change and forestry activities under Article 3.3 or 3.4 of the Kyoto Protocol; and
 - any other international units that the Government may allow by regulation.

Any restrictions placed on the acceptance of international units will be to ensure the stability and ongoing credibility of the carbon pricing mechanism, the environmental integrity and effectiveness of the carbon pricing mechanism, and consistency with Australia's international objectives and obligations. The Government may disallow the use of a given type of international unit at any time to ensure the environmental integrity of the mechanism. Liable parties holding such units in their registry accounts will be able to use those units for compliance in the compliance year in which the units were disallowed, but not subsequently.

The Government may allow other international units by regulation where:

- the addition does not compromise the environmental integrity of the carbon pricing mechanism;
- the addition is consistent with the objective of the carbon pricing mechanism and with Australia's international objectives; and
- there has been consultation with stakeholders, and analysis of the expected impact on the permit price, by the Climate Change Authority, and advance notification to the market by the Government.

The types of units accepted and qualitative restrictions on use imposed by the EU Emissions Trading Scheme and the New Zealand (NZ) Emissions Trading Scheme will be taken into account when determining what international units may be accepted for compliance under the carbon pricing mechanism. The Climate Change Authority will advise on the integrity of international units, and recommend which units should be accepted and which should be prohibited.

Linking to other credible trading schemes, including the EU Emissions Trading Scheme and the New Zealand Emissions Trading Scheme is in Australia's national interest. The Government will only consider future bilateral links with schemes that are of a suitable standard, based on a range of criteria including:

- an internationally acceptable (or, where applicable, a mutually acceptable) level of mitigation commitment;
- adequate and comparable monitoring, reporting, verification, compliance and enforcement mechanisms; and
- compatibility in design and market rules.

Treatment of Voluntary Action

The Government will take voluntary action into account when setting pollution caps. Voluntary action will be treated as additional when accounting for Australia's post-2012 targets.

In the flexible price period, permit holders may voluntarily cancel their permits. These will not be counted towards meeting Australia's national emissions targets and their cancellation will reduce the number of permits available in the market. Holders of international units and ACCUs may voluntarily cancel their units at any time, as soon as the Registry is in operation.

A Pledge Fund will be established from the commencement of the carbon pricing mechanism to help individuals access the carbon market and voluntarily cancel emissions units. The units the Pledge Fund will voluntarily cancel will include Australian carbon permits, Kyoto compliant and non-Kyoto compliant ACCUs, and eligible international units. Contributions to the Pledge Fund will be tax deductible.

Any purchases of accredited GreenPower from the date that the carbon pricing mechanism commences will be accounted for as voluntary action. In the fixed price period, the Government will measure GreenPower purchases on an annual basis and take these into account when setting the initial pollution caps. As pollution caps are to be set by 31 May 2014, only those GreenPower purchases measured at the time of making regulations will be counted in the initial caps, that is, GreenPower purchases for 2012-13. The remaining GreenPower purchases during the fixed price phase will be accounted for in later caps. In the flexible price period, the Government will measure GreenPower purchases on an annual basis and directly take these into account in setting the pollution caps five years into the future. Adjustments to the pollution cap for GreenPower will be backed by a commitment not to count those emission reductions towards meeting the national emissions reduction target.

Voluntary action in addition to GreenPower and voluntary cancellation of units could also be recognised, on advice from the Climate Change Authority on whether a robust methodology can be developed to recognise additional voluntary action by households.

Tax Treatment of Permits

The cost of a permit will be deductible, with the deduction effectively being deferred through the rolling balance method until the permit is sold or surrendered. The proceeds of selling a permit will be assessable income on revenue account in the income year the permit is sold.

Under the rolling balance method, any difference in the value of permits held at the beginning and the end of an income year will be reflected as a variation in a taxpayer's taxable income with any increase in value included in assessable income and any decrease in value allowed as a deduction.

Where a permit is surrendered for a purpose unrelated to producing assessable income (for example, voluntary cancellation by an individual), the deduction of the cost of the permit will be reversed by including an equivalent amount in assessable income.

Taxpayers will be able to elect to value permits that they hold at the end of the first income year they hold permits either at historical cost or at market value, with the default being historical cost.

Taxpayers will be able to change their valuation method once during the fixed price period, and after a method has been in use for four years during the flexible price period.

The value of a permit will be deemed to be its market value where:

- it is transferred under a non-arm's-length transaction between related parties or a transaction with an associate;
- it is issued to the taxpayer as part of an assistance arrangement; or
- it is an ACCU issued under the Carbon Farming Initiative.

For income tax purposes, a permit will be deemed to be held by the beneficial owner of the permit.

Where permits are imported or exported they will be treated as if they were sold and repurchased in the relevant registries at market value.

Expenditure incurred in becoming the holder of a permit will be deductible in the year the taxpayer starts to hold a permit, except where the permit is:

- issued as part of an assistance arrangement, in which case the deduction will be denied; or
- an ACCU issued under the Carbon Farming Initiative, in which case the existing income tax law will apply. An exception to this rule is expenditure incurred in preparing or lodging reports necessary for an ACCU to be issued.

A deduction will be denied for any penalties (including shortfall charges) imposed under the carbon pricing mechanism.

Assistance grants will be subject to the existing tax law, not special provisions.

Permits that are freely allocated to entities undertaking an eligible emissions-intensive, trade-exposed (EITE) activity will be valued at zero where:

- a taxpayer held the permit at the end of the relevant income year;
- the taxpayer held the permit at all times from when it was issued to the end of the income year; and
- the income year ends on or before the last surrender date for the compliance year for which they are issued.

Thereafter, the normal valuation rules will apply.

Specifically providing for the income tax treatment of permits will necessarily create a range of interaction issues with the rest of the tax law. The general rules include principles to manage these interactions.

Amendments will be made to the A New Tax System (Goods and Services Tax) Act 1999 to make supplies of permits under the carbon pricing mechanism GST-free. Application of the normal GST rules will apply to transactions in financial derivatives of permits and payments of grants of assistance.

The accounting treatment of permits and transactions under the carbon price mechanism will be determined in accordance with international accounting standards, as adopted in Australia. The auditing of potential emissions liabilities will continue to meet Australian auditing standards which conform with the International Standards on Auditing (issued by the International Auditing and Assurance Standards Board).

Climate Change Authority

The Climate Change Authority (the Authority) will be established by legislation as an independent body to provide expert advice on key aspects of the carbon pricing mechanism and the Government's climate change mitigation initiatives.

The Government will remain responsible for carbon pricing policy decisions with significant and far-reaching implications.

The Authority will perform a number of functions. It will:

- provide recommendations to the Government on future pollution caps. In making its recommendations the Authority will have regard to:
 - announced Government medium and long-term targets;
 - estimates of the global emissions budget;
 - progress towards emissions reductions;
 - economic, social and other relevant factors; and
 - voluntary action, including GreenPower and any approved new methodologies;
- make recommendations on the indicative national trajectories and long-term emissions budgets, having regard to the long-term target set by the Government and estimates of the global emission budget;
- provide independent advice to the Government on the progress that is being made to reduce Australia's emissions to meet national targets, any indicative national trajectory or budget. As part of this, the Authority will provide analysis of the extent to which the emissions reduction objectives are being achieved from reductions in domestic emissions and from the purchase of international units;
- conduct regular reviews of and make recommendations on the carbon pricing mechanism (household assistance and the Jobs and Competitiveness Program will be reviewed separately);

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- conduct reviews of and make recommendations on the National Greenhouse and Energy Reporting system, the Renewable Energy Target and the Carbon Farming Initiative;
 - make recommendations to the Government on whether a robust methodology could be developed to recognise additional voluntary action by households;
 - provide advice to Government on the role of the price floor and price ceiling beyond the first three years of the flexible price phase;
 - conduct reviews and make recommendations on other matters as requested by the Minister for Climate Change and Energy Efficiency or the Parliament; and
 - conduct or commission its own independent research and analysis into climate change and other matters relevant to its functions.

The Authority will engage with representatives interested in climate change from across Australia in order to share research and information on climate change and gain input into its analysis.

The Authority will be made up of nine experts with a particular focus on climate science, economics, climate change mitigation, emissions trading, investment and business. The Authority will be supported by an independent staff.

The Authority will provide recommendations to Government on the pollution caps for the first five years of the flexible price period by 28 February 2014. Starting in 2016, the Authority will produce annual recommendations for the annual one-year extension of pollution caps.

The Authority will provide advice to Government on the indicative national emissions trajectory or carbon budget at the time of reporting on pollution caps. The first report on progress in meeting national emissions reduction targets and trajectories will be provided to the Government by 28 February 2014 and then reported annually.

The first review of the carbon pricing mechanism will be provided to the Government by 31 December 2016, the second review by 31 December 2018 and then each subsequent review within five years of the last.

A review of the Renewable Energy Target will take place in the second half of 2012 and every two years after that.

A review of the Carbon Farming Initiative will take place by the end of 2014 and every three years after that.

A review of the National Greenhouse and Energy Reporting System will be conducted at least every five years and may be done as part of the review of the carbon pricing mechanism.

The Authority will prepare a public report with each of its reviews.

The Authority will be required to hold public consultations as part of each of its reviews. This will include public hearings and a process of public submissions.

Following receipt of the Authority's first report by 28 February 2014, the Government will include its formal response in the 2014-15 Commonwealth Budget and a separate statement will be produced and tabled in Parliament.

The Government will introduce the first carbon budget regulations (comprising the first set of pollution caps for the next five years) into the Parliament no later than the end of May 2014. If the pollution caps presented in the regulations differ from the recommendations of the Authority, the Government will justify the difference in its response.

Clean Energy Regulator

The Clean Energy Regulator (the Regulator) will be established to administer the carbon pricing mechanism within a limited and legislatively prescribed discretion.

Responsibilities of the Regulator will include:

- providing education on the carbon pricing mechanism, particularly about the administrative arrangements of the carbon pricing mechanism;
- assessing emissions data to determine each entity's liability;
- operating the Australian National Registry of Emissions Units;
- monitoring, facilitating and enforcing compliance with the carbon pricing mechanism;
- allocating permits including freely allocated permits, fixed price permits and auctioned permits;
- applying legislative rules to determine if a particular entity is eligible for assistance in the form of permits to be allocated administratively, and the number of other permits to be allocated;
- administering the National Greenhouse and Energy Reporting system, the Renewable Energy Target and the Carbon Farming Initiative, the regulatory functions which will be brought together with the Clean Energy Regulator to form an independent regulator from July 2012; and
- accrediting auditors for the Carbon Farming Initiative and the National Greenhouse and Energy Reporting System.

Productivity Commission reviews

The Productivity Commission (PC) will be commissioned to undertake ongoing work to quantify mitigation policies in other major economies. It will start immediately to expand the number of countries, industries and policies evaluated and to build up a comprehensive, robust and up-to-date data set.

Assistance arrangements will be reviewed by the PC in the third year of the carbon pricing mechanism (2014-15) and thereafter consistent with the timing of general

scheme reviews. A review of assistance provided to a particular activity could be conducted earlier than 2014-15 if requested by the Government, and priority could be given to:

- industry sectors receiving the greatest level of assistance;
- industry sectors experiencing the fastest rates of growth in assistance; or
- industry sectors where there is strong evidence of windfall gains as a result of the assistance.

Reviews will consider:

- whether an alternative pattern and level of assistance would meet the Program's objectives particularly economic and environmental efficiency, more effectively;
- the feasibility of, and availability of data for, amending the Jobs and Competitiveness Program assessment framework to one based on an assessment of the estimated expected global uplift of prices of individual EITE products if other countries had implemented a carbon price equivalent to that applied in Australia, as proposed by the Garnaut Climate Change Review—Update 2011. This review will consider whether it is the most effective and efficient means of preventing carbon leakage and assisting the industry to transition and whether the Government should adopt this approach;
- whether EITE activities are making progress towards best practice energy and emissions efficiency for the industrial sector to which those activities relate;
- whether additional activities should be added to the Jobs and Competitiveness Program on account of commodity price movements or other relevant matters;
- whether windfall gains are being conferred on entities carrying out EITE activities;
- the effect of existing facilities having no cap on permit allocations;
- the growth in the EITE sector and implications for total free permit allocations under an emissions cap;
- the existence of broadly comparable carbon constraints applying internationally;
- the appropriateness of the LNG supplementary allocation policy;
- the impact of carbon pricing on the competitiveness of EITE industries, including an analysis of carbon cost pass-through, the level of abatement achieved and the effect of the carbon productivity contribution on EITE activities over time and whether the carbon productivity contribution should be changed for a specific industry; and
- whether less than 70 per cent of relevant competitors in each industry have introduced comparable carbon constraints, taking into account all mitigation policies and relevant assistance policies, and hence whether the application of the carbon productivity contribution rate for a specific industry should pause when assistance rates reach 90 per cent for highly emissions intensive industries, or 60 per cent for moderately emissions intensive industries.

At least two Associate Commissioners with experience in the markets and production of EITE products will be appointed to the PC to take part in these Reviews.

Once the carbon pricing mechanism has commenced, firms may make a request to the Government to have the impact of the mechanism on their sector assessed. The Government will establish guidelines which set out when such requests will be referred to the PC and the terms of reference for these reviews. These assessments will:

- take into account the industry's circumstances, including a range of factors related and unrelated to the carbon pricing mechanism that affect the competitiveness of the industry, and any assistance provided to the industry; and
- make recommendations to the Government about whether it should adjust support to the industry and the appropriate mechanism for that assistance.

The PC will conduct a review of fuel excise arrangements, including an examination of the merits of a regime based explicitly and precisely on the carbon and energy content of fuels.

Household, Pensioner, Veterans and Aged Care Assistance

The Government's commitments to households are:

- more than 50 per cent of the carbon pricing mechanism revenue will be used to assist households;
- millions of households will be better off under the carbon pricing mechanism;
- assistance will be permanent;
- low-income households (including all pensioners) will be eligible for assistance that at least offsets their average expected cost impact from carbon pricing;
- middle-income households will be eligible for assistance that helps them to meet the expected cost impact from carbon pricing; and
- households containing individual/s with a relevant concession card and who are certified by a medical practitioner as having a medical condition or disability that means they have high essential electricity costs are eligible for additional assistance through the Essential Medical Equipment Payment.

Cash assistance will be delivered through the tax and transfer system. Assistance provided through transfer payments will be permanent and increase with the cost of living.

Assistance will be delivered through a lump sum payment — the Clean Energy Advance — made to eligible recipients in May-June 2012. On-going assistance will then be provided through a new Clean Energy Supplement.

All pensioners will receive annual assistance through their pension equivalent to a 1.7 per cent increase in the maximum rate of the pension. This includes those on the Age

Pension, Service Pension, Carer Payment, Disability Support Pension. Assistance for pensioners will be:

- up to \$338 per year for singles
- up to \$510 per year for couples combined.

Self funded retirees who are holders of the Commonwealth Seniors Health Card (CSHC) will get \$338 per year for singles and \$510 per year for couples, combined, through their Seniors Supplement. Allowance recipients get annual assistance through their payments equivalent to a 1.7 per cent increase in the maximum rate of their payments.

Eligible families get assistance through a 1.7 per cent payment increase in Family Tax Benefit of:

- up to \$110 for each child; and
- up to \$69 per family in receipt of Family Tax Benefit Part B.

In addition, up to \$300 in Single Income Family Supplement will be available for single income families with a primary earner between \$68,000 and \$150,000, who would receive little or no assistance through tax changes compared with dual income families with similar income.

A new Low Income Supplement of \$300 will be available to those who can show they did not receive enough assistance to offset their average cost impact. People can apply for the payment from 1 July 2012.

Veterans on compensation payments made under the Veterans Entitlement Act 1986 — including disability pensions and the war widow/ers pension — and the Military Compensation and Rehabilitation Act 2004 — including permanent impairment payments and wholly dependent partner payments — will receive assistance equivalent to a 1.7 per cent increase in their payment.

The Government will deliver tax cuts to target assistance to low- and middle-income individuals by more than tripling the statutory tax-free threshold from \$6,000 to \$18,200 on 1 July 2012, and adjusting the first two marginal tax rates. This will replace all but \$445 of the low-income tax offset (LITO), and provide current tax payers with annual incomes up to \$68,000 with a tax cut of at least \$300.

The statutory tax-free threshold will be further increased to \$19,400 when the carbon price is replaced with an emissions trading system in 2015-16. This will reduce the LITO to \$300, and bring the total value of tax cuts to people with annual incomes up to \$68,000 to at least \$385.

The current and new personal income tax rates and thresholds are shown in the following table:

Statutory Rates and Thresholds	2011-12		2012-13		2015-16
	Threshold	Marginal Rate	Threshold	Marginal Rate	Threshold
1 st Rate	\$6,001	15.00%	\$18,201	19.00%	\$19,401
2 nd Rate	\$37,001	30.00%	\$37,001	32.50%	\$37,001
3 rd Rate	\$80,000	37.00%	\$80,001	37.00%	\$80,001
4 th Rate	\$180,001	45.00%	\$180,001	45.00%	\$180,001
Effective tax free threshold	\$16,000		\$20,542		\$20,979
LITO	\$1,500	4% withdrawal rate from \$30000	\$445	1.5% withdrawal rate from \$37000	\$300

The income definitions for the household commitments are set out in the following table:

Household Income	Single	Couple without children	Couple with children	Sole parent
Low (less than)	\$30,000	\$45,000	\$60,000	\$60,000
Medium (between)	\$30,000 to \$80,000	\$45,000 to \$120,000	\$60,000 to \$150,000	\$60,000 to \$150,000
High (above)	\$80,000	\$120,000	\$150,000	\$150,000

Some of the household assistance paid to residents of aged care facilities will be distributed to their aged care facilities, which pay for most of their residents' costs of living.

Household assistance will be shared between aged care providers and their residents in an approximate 55:45 split, by increasing the percentage of the basic pension payable to the provider (from 84 per cent to 85 per cent).

'Grandfathering' arrangements will be established for around 2 per cent of existing residents not in receipt of a pension or other income support payment and not holding a CSHC, so their fees do not increase as a result of the change in fee structure outlined above.

Aged care facilities will be provided with additional funding to address the costs they incur in respect of their 'grandfathered' residents.

The Essential Medical Equipment Payment will be provided to households containing individual/s with a relevant concession card and who have very high essential electricity costs due to a medical condition or disability.

The annual cash payment of \$140 will be paid through Centrelink and the Department of Veterans' Affairs (DVA) to people using pieces of equipment recognised by any state or territory medical electricity assistance scheme. People with thermoregulatory dysfunction and a relevant concession card will also be eligible for the same level of assistance.

A claimant must meet the following criteria to be eligible for the Essential Medical Equipment Payment:

- the claimant is a current Australian Government concession card holder (Pensioner Concession Card, Health Care Card, CSHC or equivalent DVA concession card excluding DVA Gold Card);
- the claimant must show that they, or the concession card holder they care for in their household, meet specified medical condition/medical appliance requirements; and
- the claimant or the person they care for is the holder of the electricity account.

The Treasurer and the Minister for Families, Housing, Community Services and Indigenous Affairs, in consultation with relevant ministers, will annually review the adequacy of household assistance in the Budget process. This review will examine the real value of the assistance provided on the introduction of the carbon pricing mechanism taking into account:

- movements in prices for a consumption basket used in calculating the assistance;
- the indexation arrangements for the assistance provided, including the adjustment for the bring forward; and
- any new information about the weights of items in the consumption basket.

In addition to these annual reviews, there will be a review of the household assistance package in parallel with the carbon pricing mechanism review in 2013-14.

Jobs and Competitiveness Program

Assistance will be provided through allocation of permits early in each compliance period to new and existing entities undertaking an eligible emissions-intensive trade-exposed (EITE) activity prescribed in regulations.

Assistance will be based on an individual entity's previous year's level of production with a true-up to account for actual production.

Upon closure, recipients must relinquish permits for production that did not occur in that year.

100 per cent of permits allocated in respect of indirect emissions and 75 per cent of permits allocated in respect of direct emissions will be provided early in each compliance period, with the remaining 25 per cent of permits relating to direct

emissions allocated early in the following financial year. This means that permits will be provided in line with progressive payment obligations.

The Government will provide a buy-back facility for firms in receipt of free permits to sell these permits back to the Government as outlined under the scheme architecture. In the flexible price period, assistance will be provided early in each compliance year.

Eligibility of activities will be based on an assessment of all entities conducting an activity during the historic baseline period consistent with the process, criteria and requirements currently used for Partial Exemption Certificate assistance under the Renewable Energy Target.

Trade-exposure is assessed through quantitative and qualitative tests:

- the quantitative test threshold would be a trade share (ratio of value of imports and exports to value of domestic production) greater than 10 per cent in any one of the years 2004-05, 2005-06, 2006-07 or 2007-08; and
- the qualitative test threshold would be a demonstrated lack of capacity to pass through costs due to the potential for international competition.

The emissions intensity assessment is based on average emissions per million dollars of revenue or emissions per million dollars of valued added.

Time period for assessment:

- emissions data: 2006-07 to 2007-08; and
- revenue or value added data: 2004-05 to the first half of 2008-09.

In situations where a given output was produced from eligible activities using either primary materials or recovered or recycled materials as inputs, the same rate of assistance will be applied to both activities. Activity assessments and activity definitions that have already taken place will remain valid.

Businesses will receive assistance for their direct emissions as well as the cost of their indirect emissions from electricity and steam use, and the cost increases for upstream emissions from natural gas and its components (for example, methane and ethane) used as feedstock and sequestered in the output of the activity.

Allocative baselines for activities will be based on the historic industry average level of emissions per unit of production for all entities conducting an activity during the assessment period. The electricity allocation factor will be set at one permit per megawatt hour. However, this may be adjusted in respect of existing large electricity supply contracts for entities consuming greater than 2,000 gigawatt hours per year, and where contractual arrangements entered into before 3 June 2007 are still in force (without having been renegotiated or reviewed) within 60 days after Royal Assent of the Act. In such a situation, these contracts will be considered by the Regulator with a

view to determine an entity-specific electricity allocation factor. The natural gas feedstock allocation factor will be set state-by-state.

Initial rates of assistance will be:

- 94.5 per cent of the industry average baseline for activities with an emissions intensity of at least 2,000t CO₂-e/\$million revenue or at least 6,000t CO₂-e/\$million value added.
- 66 per cent of the industry average baseline for activities with an emissions intensity between 1,000t CO₂-e/\$million and 1,999t CO₂-e/\$million revenue or between 3,000t CO₂-e/\$million and 5,999t CO₂-e/\$million value added.

LNG projects will receive a supplementary allocation to ensure an effective assistance rate of 50 per cent in relation to their LNG production each year.

Initial rates of assistance will be reduced by a carbon productivity contribution of 1.3 per cent per year.

No maximum cap on allocations will apply to existing facilities. Allocations to new facilities will be limited by regulations in a manner which avoids windfall gains from assistance arrangements.

New entities conducting an existing EITE activity will receive the same assistance as existing entities conducting the same activity. Activities new to Australia will be able to apply for EITE eligibility. Assessments and baselines will be made on the basis of international best practice emissions intensity. Allocations to existing entities conducting EITE activities will not be adjusted for allocations to new entrants.

Any changes to assistance arrangements that will have a negative effect on business will not occur before the sixth year of the carbon price.

Three years' notice will be provided of modifications to EITE allocations that will have a negative effect on business. The notice period may overlap with the five year minimum assistance period. Assistance arrangements will be reviewed by the Productivity Commission as outlined in the policy on Productivity Commission reviews.

The Government would implement the approach proposed by the Garnaut Climate Change Review—Update 2011 if the Productivity Commission recommends that it is the most effective and efficient means of preventing carbon leakage and assisting the industry to transition and recommends that the Government adopt this approach. This will be subject to the minimum assistance and notice period set out above.

Energy Security Measures

An Energy Security Fund will provide transitional assistance to promote the transformation of the electricity generation sector from high to low-emissions generation while addressing risks to energy security arising from the carbon price.

The Energy Security Fund will comprise:

- scope for payments for the closure of around 2,000 megawatts of very highly emissions-intensive coal-fired generation capacity by 2020, according to a publicly announced schedule. This measure will commence the process of transforming our electricity generation sector, by delivering concrete closure outcomes and providing clear signals to potential investors in low-emissions generation; and
- a limited transitional administrative allocation of permits and cash estimated at \$5.5 billion over six years to assist highly emissions-intensive coal-fired generators adjust to the introduction of a carbon price and prepare for a lower emissions future.

A new Energy Security Council including energy and financial market experts will be created to advise the Government in the event that systemic risks to energy security emerge from the financial impairment of power stations arising from any source, including from the introduction of carbon pricing.

The Council will provide advice to the Treasurer on the appropriate policy instruments available to address energy security risks. This will include providing advice to the Treasurer on the provision of Government loans to generators which need to refinance their debt if finance from the market is not available.

Recognising the difficult borrowing conditions faced by coal-fired generators, transitional loans may also be offered to emissions-intensive generators to provide additional working capital for the purchase at auction of future vintage carbon permits.

In both of the above cases these loans will be priced on terms that encourage generators to seek private finance in the first instance.

To mitigate energy security risks arising from the introduction of carbon pricing and to incentivise a transformation to low-emissions generation, focusing on the most emissions-intensive coal-fired generators.

Eligibility to participate in an expression of interest process for closure contracts will be limited to coal-fired generators with emissions intensity greater than 1.2t CO₂-e per MWh of electricity on an 'as generated' basis.

Following an expression of interest process and negotiations with selected generators the Government will contract with one or more generators for closure of agreed capacity on the basis of value for money.

Payments to close will be contingent upon power system reliability requirements, payment of workers' entitlements and arrangements for appropriate remediation of the site of the power station (and of a related coal mine where appropriate).

Administrative allocations of free carbon permits will be limited to generators with emissions intensity above 1.0t CO₂-e per MWh of electricity on an 'as generated' basis.

To support energy security, generators will be eligible to receive administrative allocations only if they comply with power system reliability requirements and develop and publish Clean Energy Investment Plans (see below). Generators may exit the market and still receive their administrative allocations if they satisfy the Australian Energy Market Operator that there is alternative capacity in the market available to meet demand, or where they have invested in new lower-emissions replacement capacity themselves.

Government loans will be available for the purchase at auction of future vintage carbon permits for the first three years of carbon permit auctions. The Government will also consider making loans available where generators need to refinance their debt but finance is not available from the market. The Energy Security Council will provide advice on the provision of loans in these circumstances.

In both of the above cases, loans will be priced on terms that encourage generators to obtain private finance where possible and there will be an assessment of a potential recipient's capacity to repay the loan.

The Energy Security Council will advise the Government on systemic risks to energy security arising from the financial impairment of any market participants. Eligibility for assistance to address any systemic risks to energy security would be assessed on a case-by-case basis. The Energy Security Council will provide advice to the Government on other measures that may be required should systemic risks to energy security emerge.

Generators contracting with the Government to close will be required to forego their administrative allocations (and will not have to comply with associated conditions) but will receive value equal to that foregone assistance plus an additional payment for closure.

Administrative allocations of free carbon permits and cash payments will be provided to the value of \$5.5 billion (nominal) in five separate instalments. \$1 billion of assistance will be provided in 2011-12, followed by annual allocations of 41.705 million free carbon permits per year in the period 2013-14 to 2016-17.

Generators with an emissions intensity of above 1.0 tCO₂-e/MWh of electricity ‘as generated’ will be eligible for administrative allocations of free carbon permits and cash. For these generators, shares of administrative allocations of free carbon permits and cash will be based on the extent to which each generator’s emissions intensity exceeds 0.86 tCO₂-e/MWh ‘as generated’, multiplied by their historical energy output, calculated over the period 2008-09 and 2009-10.

To ensure that assistance is not inappropriately skewed towards the most emissions-intensive generators, for the purposes of calculating administrative allocations where an individual generator’s emissions intensity exceeds 1.3t CO₂-e per MWh of electricity on an ‘as generated basis’, it will be capped at 1.3t CO₂-e per Mwh.

A comprehensive structural adjustment support package will be made available to the workforce of generators which contract with the Government to close. This includes personalised advice on searching for a job; career options and employment programs; information about local job vacancies and access to job search facilities; help with a résumé and job applications; and advice on interview skills. Job Services Australia will also help job seekers access skills assessments, training and other employment support that will help them find new employment.

Generators receiving administrative allocations of free carbon permits will be required to provide Clean Energy Investment Plans, which will be made public. These Plans will identify their proposals to reduce pollution from existing facilities and to invest in research and development and new low or zero-emissions capacity. Information on possible projects identified under the Energy Efficiency Opportunities program will also be included in these Plans.

Additional Comments by Senator Nick Xenophon

I have long supported that Australia must act on climate change; that the risks involved in doing nothing are too great.

However, it is crucial that the scheme is credibly internationally and sustainable domestically.

Therefore, the question should not be whether Australian should take action on climate change, but what model should Australia adopt and which scheme will best ensure that true environmental benefits are achieved without damaging Australia's economy or disadvantaging local industries.

After all, imposing large adjustment costs on the economy with no prospect of incremental global abatement gain is simply not an efficient economic proposition.

I have long advocated for an intensity-based scheme, as proposed by Frontier Economics, whereby emitters are penalised for emissions above a set standard and rewarded if their emissions intensity is below the set standard.

This approach preserves the same intention the Government has to reduce Australia's emissions but would not unnecessarily raise tax revenue (or prices to consumers) in the same way the proposed carbon tax will or the proposed emissions trading scheme that will follow it.

Indeed, pre-existing taxes already create economic distortions that discourage investment, consumption and labour. When a carbon price/tax is imposed in addition to these existing taxes, the resulting economic costs are multiplicative, not additive.

The Government's current proposal will result in projected domestic emissions 18% above 2000 levels by 2020, rather than the 5 percent below 2000 levels as advocated for in the Government's previous CPRS legislation which was twice rejected by the Senate.

Furthermore, I believe an even higher abatement target can be pursued under an intensity based scheme due to the economic cost savings and because the scheme will result in lower energy price rises, which will make the low carbon transition more acceptable to consumers.

Under an intensity-based approach, baselines across sectors and activities in an economy would be set at the level that achieves the desired emissions level; any producer emitting more than the baseline has to acquire permits in excess of the baseline, and any producer emitting below the baseline is allowed to create and sell permits to those who need to buy permits.

The scheme works by simultaneously penalising higher emitters (just as occurs under a 'cap and trade' scheme) and rewarding lower emitters. In simple terms, the scheme is a 'carrots' and 'sticks' approach.

Importantly, through such a scheme, the overall price impact is reduced because the costs are confined to the proportion of emissions about the set baselines.

In line with this, I proposed the following amendments to the Exposure Draft of the Clean Energy Legislation which I believe would achieve a higher abatement target and reduce the amount of revenue churn within Australia's economy.

Proposed amendments

- * Increase target reduction emissions to 10 percent less than 2000 levels by 2020.

This target is achievable, based on modelling by Frontier Economics in August 2009, commissioned by myself and The Hon Malcolm Turnbull MP. Australia should be aiming for real reductions and this can be achieved through some of the following proposals.

- * Establish a Clean Energy Standard

Under such a scheme, the electricity generation sector will be incentivised to reduce emissions. By allocating a number of free units each year, and using a formula to reduce the number of permits issued under a benchmark for each year until 2030, this will encourage the electricity sector to reduce their emissions without substantially increasing energy prices to consumers.

- * Establish a National Energy Efficiency Scheme

White certificates schemes are successfully operating in Australia and are also common in Europe. The inclusion of a national white certificates scheme as part of the Government's proposal would promote and recognise those who are introducing commercial and domestic efficiency measures. This would lower compliance costs for electricity retailers already facing multiple energy efficiency schemes across different states and would further support an increased emissions reduction target.

- * Recognise voluntary action

It is important that the Government recognise and provide incentives for voluntary action, without reducing the obligations of emitters. Voluntary action by the Commonwealth, States and Territories, by local government bodies, other entities or individuals to reduce or offset greenhouse gas emissions, which is not otherwise accounted for under the scheme, should be rewarded.

* Require greater compliance by EITE businesses

EITE businesses should be required to demonstrate that they are both economically viable and environmentally responsible so to be eligible to continue to receive assistance.

However, I ultimately cannot support the Government's Clean Energy Legislative package as I do not believe it is an effective or economically responsible approach to reducing carbon pollution.

An intensity-based scheme would achieve a more ambitious carbon emissions reduction target and would be more attractive in managing adjustment concerns because the scheme has lower cost properties.

This would be desirable from an environmental perspective and in terms of sending a more credible signal internationally.

Further, while I believe that it is important that this Parliament debate ways to reduce Australia's carbon emissions, and it seems inevitable that the Clean Energy Legislative package will be passed with the support of the Greens, I do not believe the legislation should be implemented until a Federal Election has been called and a mandate obtained for the introduction of such policies.

Nick Xenophon

Independent Senator for South Australia

APPENDIX 1

Submissions and Additional Information received by the Committee

Submissions

- 1 Mr Grant Dinse
- 1a Supplementary submission
- 2 Professor John Freebairn
- 3 National Institute of Economic and Industry Research, with 1 attachment
- 4 Business Council of Australia, with 2 attachments
- 5 Australian Council of Trade Unions
- 6 Australian Financial Markets Association
- 7 Energy Retailers Association of Australia
- 8 Young Liberal Movement of Australia
- 9 Construction, Forestry, Mining and Energy Union
- 9a Supplementary submission
- 10 Hydro Tasmania
- 11 TRUenergy
- 12 Australian Bankers' Association Inc (ABA)
- 13 National Farmers' Federation
- 14 Centre for Policy Development
- 15 Mr John Passant, Faculty of Law University of Canberra
- 16 The Australia Institute
- 17 Institute of Public Affairs
- 18 Dr Jack Pezzey, Fenner School of Environment and Society, Australian National University
- 19 AGL Energy
- 20 Association of Mining and Exploration Companies
- 20a Supplementary submission
- 21 Sustainable Energy Association of Australia
- 22 Dr Frank Jotzo
- 23 Clean Energy Council
- 24 Confidential

- 25 Professor Warwick McKibbin, ANU College of Business and Economics
- 25a Supplementary submission, with 5 attachments
- 26 Grattan Institute, with 5 attachments
- 26a Supplementary submission
- 27 Centre for Energy and Environmental Markets
- 28 Frontier Economics
- 29 Australian Council of Social Service
- 30 Professor Ross Garnaut
- 31 Australian Petroleum Production and Exploration Association (APPEA)
- 31a Supplementary submission
- 32 The Institute of Chartered Accountants in Australia
- 33 Cement Industry Federation
- 34 Mr Andrew Oliver
- 35 The Fair Farming Group
- 36 Mr Donald Martin, with 1 attachment
- 37 Exigency Management
- 37a Supplementary submission
- 38 Australian Industry Greenhouse Network
- 39 No Carbon Tax Protest Group
- 40 LPG Australia
- 41 Commonwealth Fisheries Association
- 42 The Climate Sceptics
- 43 People for Ecologically Sustainable Transport
- 44 Griffin Energy
- 45 Chamber of Commerce and Industry Western Australia
- 46 Oxfam Australia
- 47 Jubilee Australia
- 47a Supplementary submission
- 48 Mr Jeff Lin
- 49 Dairy Australia
- 50 Pacific Hydro
- 51 The Chamber of Minerals and Energy of Western Australia
- 52 Qantas Airways
- 53 Dr Jane O'Sullivan, School of Agriculture and Food Sciences, The University of Queensland

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- 54 Frontier Economics
 - 54a Supplementary Submission
 - 55 Dr Frank Jotzo
 - 56 Mr Robert Vincin
 - 56a Supplementary Submission
 - 57 Minerals Council of Australia
 - 57a Supplementary submission
 - 57b Supplementary submission
 - 58 AGL Energy, with 3 attachments
 - 59 Printing Industries Association of Australia
 - 60 Energy Supply Association of Australia
 - 60a Supplementary Submission
 - 61 Distilled Spirits Industry Council of Australia
 - 62 Betts Transport
 - 63 Bindaree Beef
 - 64 Aerial Agricultural Association of Australia
 - 65 Regional Express
 - 66 CQ Rescue, with 1 attachment
 - 67 Mr Matt Mushalik
 - 68 The Fair Farming Group
 - 69 Superair Australia
 - 70 Boulder Steel
 - 71 Pursue Democracy
 - 72 Mackay Canegrowers
 - 73 Mr John Passant, Senior Lecturer, Faculty of Law, University of Canberra
 - 74 The Climate Sceptics
 - 75 Transport Workers Union, with 1 attachment
 - 76 Regional Aviation Association of Australia
 - 77 Business SA
 - 78 Post Office Agents Association
 - 79 Printing Industries Association of Australia
 - 80 No to Carbon Tax
 - 81 New South Wales Treasury
 - 82 Professor John Quiggin
 - 83 Australian Council of Superannuation Investors (ACSI)

- 84 National Institute of Economic and Industry Research, with 1 attachment
- 85 Australian Manufacturing Workers' Union (AMWU)
- 86 Australian Council of Trade Unions (ACTU)
- 87 Chamber of Commerce and Industry Queensland (CCIQ)
- 88 The Investor Group on Climate Change (IGCC), with 2 attachments
- 89 Commonwealth Fisheries Association
- 90 Queensland Nickel
- 91 National Association of Retail Grocers of Australia (NARGA), with 1 attachment
- 92 Confidential
- 93 Andrew Donnelly
- 94 Australian Dairy Industry Council (ADIC)
- 95 Refrigerants Australia
- 96 Geelong Chamber of Commerce
- 97 Master Builders Australia
- 98 Loy Yang Power
- 99 Moe and District Residents Association (MADRA)
- 100 Name withheld
- 101 Council of Mayors (South East Queensland)
- 102 Dr David Evans

Additional Information and Tabled Documents

- 1 Presentation notes "Western Australia's Emerging Magnetite Iron Ore Industry" tabled by Mr Simon Corrigan of CITIC Pacific Mining (a Magnetite Network member), at a public hearing in Perth on 29 April 2011
- 2 Projections of the impact of a carbon price (4 graphs), tabled by Mr Miles Prosser, Executive Director of the Australian Aluminium Council, at a public hearing in Canberra on 17 May 2011
- 3 20-page report titled "Coverage of coal mining fugitive emissions in climate policies of major coal exporting countries" dated June 2011, prepared for the Australian Coal Association by the Centre for International Economics, tabled by the Australian Coal Association at a public hearing in Canberra on 9 June 2011
- 4 29-page report titled "Economic Assessment of CPRS' Treatment of Coal Mining: EITE Activity Policy and the Coal Mining Sector" dated 7 May 2009, prepared for the Australian Coal Association by ACIL Tasman Pty Ltd, tabled by the Australian Coal Association at a public hearing in Canberra on 9 June 2011

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- 5 5-page opening statement tabled by the Australian Coal Association at a public hearing in Canberra on 9 June 2011
 - 6 List and table of the "Top 50 emitters in Australia - those eligible for assistance or compensation", tabled by Macquarie Generation at a public hearing in Sydney on 22 June 2011
 - 7 Index to the ten documents which were tabled by the Transport Workers Union (TWU) at a public hearing in Sydney on 22 June 2011
 - 8 TWU tabled document 1: "Safe Rates, Safe Roads", a Directions paper of the Federal Government's Safe Rates Advisory Group, November 2010, 55 pages
 - 9 TWU tabled document 2: "External influences on health and safety outcomes in NSW long distance trucking", Transport Workers Union and Professor Ann Williamson and Ms Rena Friswell, August 2010, 47 pages
 - 10 TWU tabled document 3: "Report of Analysis: Truck Crashes and Work-Related Factors Associated with Drivers and Motor Carriers", Michael Belzer PhD, April 2009, 219 pages
 - 11 TWU tabled document 3: Appendix 2
 - 12 TWU tabled document 4: "Fatigue, Overtaking Top Issues for Drivers: TWU/NRMA Survey", TWU and NRMA News Release, 27 June 2011, 2 pages
 - 13 TWU tabled document 5: "Safe Payments: Addressing the Underlying Causes of Unsafe Practices in the Road Transport Industry", National Transport Commission Report, The Hon Lance Wright QC and Professor Michael Quinlan, October 2008, 62 pages
 - 14 TWU tabled document 6: "Remuneration and Safety in the Australian Heavy Vehicle Industry: A Review undertaken for the National Transport Commission", Professor Michael Quinlan and The Hon Lance Wright QC, October 2008, 78 pages
 - 15 TWU tabled document 7: "Workforce Challenges in the Transport Industry", a Senate Inquiry Report by the Standing Committee on Employment, Workplace Relations and Education, August 2007, 103 pages
 - 16 TWU tabled document 8: "Temporary visas... permanent benefits", a Parliamentary Report by the Joint Standing Committee on Migration, August 2007, 182 pages
 - 17 TWU tabled document 9: "Toward a Safe and Sustainable Transport Industry", TWU submission to the Safe Payments Inquiry, National Transport Commission, September 2008, 262 pages
 - 18 TWU tabled document 10: "Workforce Challenges in Road Transport: Truck Driver Recruitment, Retention and Retirement Research Project (Stage One)", Globe Workplace, January 2007, 58 pages
 - 19 Additional information received: 16-page report titled "Impact of Proposed Carbon Price on Black Coal Mining: Analysis of existing coal mines and potential coal

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- developments based on survey data” dated 10 June 2011, prepared for the Australian Coal Association by ACIL Tasman Pty Ltd, received on 23 June 2011
- 20 5-page opening statement, tabled by Queensland Nickel at a public hearing in Mackay on 5 August 2011
- 21 PowerPoint presentation supplementing the opening statement, tabled by Queensland Nickel at a public hearing in Mackay on 5 August 2011
- 22 Submission by Queensland Nickel to the Emissions-Intensive Trade-Exposed (EITE) Expert Advisory Committee, dated 12 April 2011, tabled by Queensland Nickel at a public hearing in Mackay on 5 August 2011
- 23 RACQ CQ Rescue Bulletin (July 2011), tabled by CQ Rescue at a public hearing in Mackay on 5 August 2011
- 24 RACQ CQ Rescue 2010 Annual Community Report, tabled by CQ Rescue at a public hearing in Mackay on 5 August 2011
- 25 18 March 2011 note by the UNFCCC secretariat titled "Compilation of information on nationally appropriate mitigation actions to be implemented by parties not included in Annex I to the Convention", tabled by the Department of Climate Change and Energy Efficiency at a public hearing in Canberra on 10 August 2011
- 26 7 June 2011 revised note by the UNFCCC secretariat titled "Compilation of economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention", tabled by the Department of Climate Change and Energy Efficiency at a public hearing in Canberra on 10 August 2011
- 27 DCCEE information sheet "International Pledges on Climate Change Action: The Future", tabled by the Department of Climate Change and Energy Efficiency at a public hearing in Canberra on 10 August 2011
- 28 Additional information received: Clarification to evidence given at the public hearing on 10 August 2011, by Mr Blair Comley, Secretary of the Department of Climate Change and Energy Efficiency, provided on 11 August 2011
- 29 Additional information received: DCCEE information sheet "500 Biggest Polluting Companies", provided as a supplement to the clarification to evidence given at the public hearing on 10 August 2011, by Mr Blair Comley, Secretary of the Department of Climate Change and Energy Efficiency, provided on 11 August 2011
- 30 Additional information received: Presentation notes supplementing the appearance of Professor John Quiggin at a public hearing in Canberra on 10 August 2011
- 31 Webpage titled "What others are doing: China" taken from the Australian Government's 'Clean Energy Future' website on 10 August 2011, tabled by Senator Boswell at a public hearing in Canberra on 10 August 2011
- 32 11-page opening statement, tabled by Mr Nick Barlow, Head of Resource Development and Operational Excellence at Anglo American Metallurgical Coal at a public hearing in Geelong on 1 September 2011

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- 33 4-page opening statement tabled by Mr Ken Thompson, Executive General Manager of Loy Yang Marketing Company at a public hearing in Canberra on 16 September 2011
- 34 Additional information received: Proof Hansard from a public hearing in Canberra held on Wednesday 21 September 2011, for the Joint Select Committee on Australia's Clean Energy Future Legislation and the Inquiry into Australia's clean energy future
- 35 Additional information received: Letter to the Committee dated 5 September 2011, from the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, received on 13 September 2011
- 36 Additional information received: Letter to the Committee dated 30 September 2011, from Dr David Gruen, Executive Director of the Macroeconomic Group – Domestic, Department of the Treasury, received on 4 October 2011

Answers to Questions on Notice

- 1 Answer from the Australian Financial Markets Association to a Question on Notice taken at a public hearing in Canberra on 17 May 2011
- 2 Answer from the Institute of Chartered Accountants in Australia to a Question on Notice taken at a public hearing in Canberra on 17 May 2011
- 3 Answer from the Association of Mining and Exploration Companies to Questions on Notice taken at a public hearing in Perth on 29 April 2011, received on 30 May 2011
- 4 Answer from Verve Energy to Questions on Notice taken at a public hearing in Perth on 29 April 2011, received on 27 May 2011
- 5 Answer from the Department of Climate Change and Energy Efficiency to Questions on Notice taken at a public hearing in Canberra on 9 June 2011, received on 16 June 2011
- 6 Answer from the Department of Climate Change and Energy Efficiency to Questions on Notice taken at a public hearing in Canberra on 9 June 2011, received on 16 June 2011
- 7 Answer from the Cement Industry Federation to Questions on Notice taken at a public hearing in Melbourne on 8 June 2011, received on 21 June 2011
- 8 Answer from the Australian Petroleum Production and Exploration Association Limited (APPEA) to Questions on Notice taken at a public hearing in Canberra on 9 June 2011, received on 17 June 2011
- 9 Answer from the Energy Supply Association of Australia to Questions on Notice taken at a public hearing in Melbourne on 8 June 2011, received on 15 July 2011
- 10 Answer from AGL Energy Ltd to a Question on Notice taken at a public hearing in Sydney on 22 July 2011, received on 11 August 2011

- 11 Answer from Regional Express to Questions on Notice taken at a public hearing in Sydney on 22 July 2011, received on 18 August 2011
- 12 Answer from the Department of the Treasury to a Question on Notice taken at a public hearing in Canberra on 24 March 2011, received on 19 August 2011
- 13 Answer from Bindaree Beef Pty Ltd to a Question on Notice taken at a public hearing in Tamworth on 3 August 2011, received on 19 August 2011
- 14 Answer from the Department of Climate Change and Energy Efficiency to Questions on Notice taken at a public hearing in Canberra on 10 August 2011, received on 19 August 2011
- 15 Answer from the Tamworth Business Chamber to a Question on Notice taken at a public hearing in Tamworth on 3 August 2011, received on 22 August 2011
- 16 Answer from the Climate Institute to Questions on Notice taken at a public hearing in Canberra on 10 August 2011, received on 22 August 2011
- 17 Answer from the Department of the Treasury to Questions on Notice taken at a public hearing in Canberra on 9 June 2011, received on 29 August 2011
- 18 Answer from the Department of the Treasury to Questions on Notice taken at a public hearing in Canberra on 10 August 2011, received between 29 August 2011 and 26 September 2011
- 19 Answer from Macquarie Generation to a Question on Notice taken at a public hearing in Sydney on 22 July 2011, received on 26 August 2011, including the June 2009 report "Structural Adjustment and the CPRS" by Frontier Economics
- 20 Answer from Macquarie Generation to Questions on Notice taken at a public hearing in Sydney on 22 July 2011, received on 26 August 2011
- 21 Answer from Alcoa of Australia to a Question on Notice taken at a public hearing in Perth on 29 April 2011, received on 12 September 2011
- 22 Answer from Anglo American Metallurgical Coal to Questions on Notice taken at a public hearing in Geelong on 1 September 2011, received on 13 September 2011
- 23 Answer from Tamworth Regional Council to a Question on Notice taken at a public hearing in Tamworth on 3 August 2011, received on 13 September 2011
- 24 Confidential
- 25 Answer from Geelong Galvanizing to Questions on Notice taken at a public hearing in Geelong on 1 September 2011, received on 16 September 2011
- 26 Answer from the Queensland Farmers' Federation to a Question on Notice taken at a public hearing in Brisbane on 25 July 2011, received on 16 September 2011
- 27 Answer from Frontier Economics to Questions on Notice taken at a public hearing in Geelong on 1 September 2011, received on 16 September 2011

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- 28 Answer from the Victorian Farmers' Federation to Questions on Notice taken at a public hearing in Geelong on 1 September 2011, received on 23 September 2011
- 29 Answer from Loy Yang Power to Questions on Notice taken at a public hearing in Canberra on 16 September 2011
- 30 Answer from the Department of Climate Change and Energy Efficiency to Questions on Notice taken at a public hearing in Canberra on 16 September 2011, received between 26 September 2011 and 29 September 2011
- 31 Answer from Queensland Nickel to a Question on Notice taken at a public hearing in Mackay on 5 August 2011, received on 28 September 2011
- 32 Answer from the Chamber of Commerce and Industry of Western Australia to Questions on Notice taken at a public hearing in Perth on 29 April 2011, received on 28 September 2011
- 33 Answer from the Department of the Treasury to Questions on Notice (questions 1, 3, 4 and 5) taken at a public hearing in Canberra on 23 September 2011, received on 4 October 2011

APPENDIX 2

Public Hearings and Witnesses

Canberra, Thursday 24 March 2011

Department of the Treasury

Dr Martin Parkinson, Secretary

Mr Rob Heferen, Executive Director, Revenue Group

Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division

Perth, Friday 29 April 2011

Verve Energy

Ms Shirley Int'Veld, Managing Director

Mr Peter Winner, Manager, Corporate Relations

Chamber of Commerce & Industry Western Australia

Mr David Harrison, General Manager, Advocacy

Alcoa of Australia

Mr Alan Cransberg, Chairman and Managing Director

Mr Tim McAuliffe, General Manager, Climate Strategy & Federal Government Relations

Southern Metropolitan Regional Council

Mr Stuart McAll, Chief Executive Officer

Councillor Tony Romano, Chairman, City of Cockburn

Mr Tim Youe, Manager Business Development

Association of Mining & Exploration Companies

Mr Simon Bennison, Chief Executive

Kwinana Industries Council

Mr Chris Oughton, Director

Magnetite Network

Mr Simon Corrigan, Member, Magnetite Network

Canberra, Tuesday 17 May 2011

National Farmers Federation

Mr Charles McElhone, Manager, Economics & Trade

Institute of Chartered Accountants

Mr Yasser El-Ansary, Tax Counsel

Ms Geraldine McGarey, Sustainability Policy

Mr Chris Westworth, Financial Reporting & Audit Policy

Australian Aluminium Council

Mr Miles Prosser, Executive Director

Australian Chamber of Commerce & Industry

Mr Greg Evans, Director, Economics & Industry Policy

Frontier Economics

Mr Danny Price, Managing Director

Mr Matthew Harris, Head of Climate Change

Australian Financial Markets Association

Mr David Lynch, Head of Policy & Markets

Mr Damian Jeffree

Federal Chamber of Automotive Industries

Mr Andrew McKellar, Chief Executive

Federation of Automotive Products Manufacturers

Mr Richard Reilly, Chief Executive Officer

Melbourne, Wednesday 8 June 2011**Energy Supply Association of Australia**

Mr Brad Page, Chief Executive Officer

Cement Industry Federation

Mr Chris Leon, Chair

Ms Margie Thomson, Chief Executive Officer

Canberra, Thursday 9 June 2011**Productivity Commission**

Mr Paul Belin, Assistant Commissioner, Environmental & Resource Economics

Australian Petroleum & Production Exploration Association

Mr Damian Dwyer, Director, Energy Markets & Climate Change

Ms Belinda Robinson, Chief Executive

Department of the Treasury

Dr David Gruen, Executive Director, Macroeconomic Group

Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division

Minerals Council of Australia

Mr Mitch Hooke, Chief Executive
Mr Brendan Pearson, Deputy Chief Executive

Australian Coal Association

Mr Ralph Hillman, Executive Director
Mr Peter Morris, Economics Director

Department of Climate Change & Energy Efficiency

Dr Steven Kennedy, Deputy Secretary, Frameworks Group
Ms Jenny Wilkinson, First Assistant Secretary, Climate Strategy & Markets Division

Sydney, Friday 22 July 2011**Macquarie Generation**

Mr Russell Skelton, Chief Executive Officer

Regional Express

Mr Christopher Hine, Chief Operating Officer
Mr Warrick Lodge, General Manager, Network Strategy & Sales

Transport Workers Union

Mr Tony Sheldon, National President
Mr Ray Childs, TWU Delegate, Owner Driver
Mr John Waltis, TWU Employee Delegate, Linfox

Australian Gas Company Limited

Mr Tim Nelson, Head of Economic Policy & Sustainability
Mr Simon Kelley, Manager, Economic Policy & Regulation

Brisbane, Monday 25 July 2011**Queensland Chamber of Commerce & Industry**

Mr David Goodwin, President
Mr Nick Behrens, General Manager
Ms Megan Johns, Senior Policy Analyst

Queensland Farmers Federation

Mr Dan Galligan, Chief Executive Officer

Queensland Resources Council

Mr Michael Roche, Chief Executive Officer
Mr David Rynne, Director, Economic Policy

Tamworth, Wednesday 3 August 2011**Inverell Freighters**

Mr Keri Brown, Managing Director

Bindaree Beef

Mr Phillip Kelly, Chief Financial Officer

Tamworth Regional Council

Councillor Colin Murray, Mayor

Councillor Russell Webb, Deputy Mayor

Tamworth Business Chamber

Mr Tim Coates, President

Namoi Valley Bricks

Mr Michael Broekman, General Manager

Grain Products Australia

Mr Henry Segerius, General Manager, Operations

Mackay, Friday 5 August 2011**Queensland Chamber of Commerce & Industry**

Mr Peter Grant, Chair, Mackay Policy Council

Mackay Whitsunday Regional Development Corporation (REDC)**Mackay Area Industry Network (MAIN)**

Ms Narelle Pearse, Chief Executive Officer (REDC) and Managing Director (MAIN)

Mackay Canegrowers

Mr Paul Schembri, Chair

Mr Kerry Latter, Chief Executive Officer

Mr Bernard Milford, Senior Policy Advisor

Tourism Whitsundays

Mr Peter O'Reilly, Chief Executive Officer

Queensland Nickel

Mr Trefor Flood, General Manager

Mr David Morgan, Sales & Marketing Director

MKY Sugar

Mr John Hodgson, Business Development Manager

Mr Ken Griffin, Senior Production Engineer

Mr Greg Johnson, Environmental Manager

CQ Rescue

Dr Peter Bastable, Chair, CQ Rescue Board

Canberra, Wednesday 10 August 2011**Department of the Treasury**

Dr David Gruen, Executive Director, Macroeconomic Group Domestic

Mr Rob Heferen, Executive Director, Revenue Group

Mr Marty Robinson, Manager, Household Modelling & Analysis Unit

Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division

Ms Luise McCulloch, General Manager, Industry, Environment & Defence Division

Mr Rob Raether, Principal Adviser, Industry, Environment & Defence Division

Department of Climate Change & Energy Efficiency

Mr Blair Comley, Secretary

Dr Steven Kennedy, Deputy Secretary, Frameworks Group

Ms Jenny Wilkinson, First Assistant Secretary, Climate Strategy & Markets Division

Professor John Quiggin *via videoconference*

Australian Research Council Federation Fellow, School of Economics, University of Queensland

Professor Henry Ergas

Professor of Infrastructure Economics, University of Wollongong

Australian Chamber of Commerce & Industry

Mr Greg Evans, Director, Economic & Industry Policy

The Climate Institute

Mr Erwin Jackson, Deputy Chief Executive Officer

Geelong, Thursday 1 September 2011**Pacific Hydro**

Mr Andrew Richards, Manager, Corporate Government Affairs

Ms Bridget Ryan, Senior Policy Manager

Geelong Galvanizing

Mr David Chaston, General Manager

Victorian Farmers Federation

Mr Peter Tuohey, Chair, Farm Business & Regional Development Committee

Geelong Chamber of Commerce & Industry

Mr Jim Walsh, President

Ms Bernadette Uzelac, Executive Officer

Anglo American Metallurgical Coal

Mr Nick Barlow, Head of Resource Development & Operational Excellence

Frontier Economics

Mr Danny Price, Managing Director

Mr Matthew Harris, Head of Climate Change

Federal Chamber of Automotive Industries

Mr Tim Reardon, Chief Executive Officer

Canberra, Friday 16 September 2011

Department of Climate Change & Energy Efficiency

Dr Steven Kennedy, Deputy Secretary, Frameworks Group

Dr Subho Banerjee, Deputy Secretary, Adaptation, International & Regulatory Group

Ms Jenny Wilkinson, First Assistant Secretary, Climate Strategy & Markets Division

Mr James White, Assistant Secretary, Strategy & Market Linkages Branch

Mr Tas Sakellaris, Assistant Secretary, Carbon Price Legislation Branch

Loy Yang Power

Mr Ken Thompson, Executive General Manager, Loy Yang Marketing Company

Mr Simon Vanderzalm, Manager Strategy & Development, Loy Yang Marketing Company

Canberra, Friday 23 September 2011

Department of the Treasury

Dr David Gruen, Executive Director, Macroeconomic Group Domestic

Mr Rob Heferen, Executive Director, Revenue Group

Mr Marty Robinson, Manager, Household Modelling & Analysis Unit

Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division

Ms Luise McCulloch, General Manager, Industry, Environment & Defence Division

Mr Rob Raether, Principal Adviser, Industry, Environment & Defence Division

Investor Group on Climate Change

Mr Nathan Fabian, Chief Executive

APPENDIX 3

Terms of reference: Multi-Party Climate Change Committee

1. The Multi-Party Climate Change Committee ('the Committee') is established to:
 - 1.1. Consult, negotiate, and report to the Cabinet, through the Minister for Climate Change and Energy Efficiency, on agreed options for the implementation of a carbon price in Australia; and
 - 1.2. Provide advice on, and participate in, building community consensus for action on climate change.
2. The Committee decisions will be reached by consensus or, if there are differences that remain after good faith discussions, these will be presented to the Cabinet, but with every effort made to produce workable options.
3. The Committee is established on the basis that a carbon price is an economic reform that is required to reduce carbon pollution, to encourage investment in low emissions technologies and complement other measures including renewable energy and energy efficiency.
4. The Committee will consider mechanisms for introducing a carbon price (including a broad-based emissions trading scheme, a broad-based carbon levy, a hybrid of both, and economy-wide and sector-based approaches) and will consider issues such as coverage, international linking, implementation issues, assistance measures for households and businesses (including emissions-intensive trade-exposed businesses) and review provisions.
5. From time to time the Committee, by agreement, may discuss other aspects of climate change policy that would benefit from multi-party consideration and discussion. However, the Committee's deliberations will be broadly limited to the issue of a carbon price.
6. The Committee will be informed by, and responsible for, measures including but not limited to:
 - 6.1. Inviting Professor Ross Garnaut to update the Garnaut Climate Change Review and to provide advice on pricing carbon;
 - 6.2. Consider the findings of an expert body, which will be tasked with calculating the carbon price equivalent of measures taken by other countries;
 - 6.3. Inviting experts to conduct a public forum in Parliament House on the economic, environmental and social impacts of climate change;

- 6.4. Receiving up-to-date date assessments of the science (from the Climate Change Commission, Australian Academy of Science, the Bureau of Meteorology and CSIRO, and eminent scientists);
 - 6.5. Considering whether a Citizens' Assembly on Climate Change should be established and, if so, its objectives, format and timeframes; and
 - 6.6. Considering the objectives, functions, form and membership of the Climate Change Commission.
7. The Committee will establish a work program that addresses these terms of reference.
 8. The Committee will ensure its deliberations and papers remain confidential to the Committee and the Cabinet until a final position is agreed or all parties to the Committee agree otherwise. At its initial meeting the Committee will determine the mechanism by which it will provide updates of its work.
 - 8.1. As part of building community consensus around the need for action on climate change and a carbon price, the Committee may choose to make some of its materials available to the public.
 - 8.1.1. Committee members may not act unilaterally in this regard.
 - 8.1.2. Committee members will be mindful of the need to balance public participation against effective and genuine negotiation.
 9. The Committee will meet regularly, usually monthly, until the end of 2011, at which time the ongoing need for the Committee will be considered.
 10. In making its recommendations, the Committee shall have regard to:
 - 10.1. The Copenhagen Accord;
 - 10.2. Australia's national economic, social and environmental interests;
 - 10.3. The views and ideas of the Australian people as determined through consultation and public forums;
 - 10.4. The views and ideas of experts, and key stakeholders;
 - 10.5. International trends, including action taken by other countries;
 - 10.6. Commonwealth, state and territory climate change policies; and
 - 10.7. The impacts of, and interactions between, proposed carbon price mechanisms and complementary measures.
 11. The Committee will be supported by:
 - 11.1. Up to four permanent expert advisers appointed by the Government to regularly advise the Committee on their areas of expertise.

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- 11.2. A Secretaries' Group, comprising Secretaries of the Departments of Prime Minister and Cabinet, the Treasury, Finance and Deregulation, Resources, Energy and Tourism, Climate Change and Energy Efficiency (chair), Agriculture, Fisheries and Forestry, Families, Housing, Community Services and Indigenous Affairs, Foreign Affairs and Trade, Infrastructure and Transport, Innovation, Industry, Science and Research, Sustainability, Environment, Water, Population and Communities, with others participating as required;
 - 11.3. The Department of Climate Change and Energy Efficiency (in relation to most policy matters), and the Treasury (in relation to modelling, macroeconomic impacts, budgetary impacts and any changes to the tax and transfer systems to compensate certain households for price impacts of any scheme).
12. The Committee would generally meet in the Cabinet room. The Cabinet Division of the Department of Prime Minister and Cabinet will be responsible for minute-taking.

Source: <http://www.climatechange.gov.au/en/government/initiatives/multi-party-committee/terms-of-reference.aspx> (accessed 16 August 2011)