

The Senate

Select Committee on the
Scrutiny of New Taxes

Final Report -

The Carbon Tax:
Secrecy and spin cannot hide carbon tax flaws

November 2011

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Senate Select Committee on Scrutiny of New Taxes

43rd Parliament

Membership of the committee

Senator Mathias Cormann, Chair	Western Australia, LP
Senator Doug Cameron Deputy Chair from 22.07.11	New South Wales, ALP
Senator Matt Thistlethwaite Deputy Chair from 07.07.11 to 15.07.11	New South Wales, ALP
Senator David Bushby	Tasmania, LP
Senator Mitch Fifield	Victoria, LP
Senator John Madigan, from 07.07.11	Victoria, DLP
Senator John Williams	New South Wales, NATS

Substitute Members

Senator Ron Boswell to replace Senator David Bushby for 23 to 24 September 2011

42nd Parliament

Members

Senator Mathias Cormann, Chair	Western Australia, LP
Senator Steve Hutchins, Deputy Chair to 30.06.11	New South Wales, ALP
Senator David Bushby	Tasmania, LP
Senator Doug Cameron	New South Wales, ALP
Senator Mitch Fifield	Victoria, LP
Senator John Williams	New South Wales, NATS

Participating members for this inquiry

Senator Ron Boswell	Queensland, NATS
Senator Michaelia Cash	Western Australia, LP
Senator Gary Humphries	ACT, LP
Senator Brett Mason	Queensland, LP
Senator Nick Xenophon	South Australia, IND

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Executive Summary

The Senate Select Committee on the Scrutiny of New Taxes (the committee) tabled its very comprehensive interim report on the carbon tax, *The Carbon Tax: Economic pain for no environmental gain*, on Friday, 7 October. On the same day the Labor-Green dominated Joint Select Committee on Australia's Clean Energy Future Legislation (the Joint Committee) also released its report about the carbon tax legislative package.

This final report of the committee on the carbon pricing plan provides some further assessments of the government's carbon tax and emissions trading scheme proposal in the context of issues that have emerged since the reports by the two committees have been released. This further report draws upon information that emerged during public discussions and evidence received by the Senate Supplementary Estimates Committees in the week of 17 October 2011.

Modelling

The committee's inquiry highlighted a number of concerns about the Treasury's modelling of the government's carbon tax, including:

- the failure to model a scenario where Australia imposes a carbon tax and its major resource competitors do not;
- the questionable nature of some of the assumptions made by the Treasury, including that:
 - the economy will maintain full employment;
 - countries will honour all the pledges made at Cancun even though these pledges are not legally binding;
 - countries will remain on a substantial abatement trajectory even when those pledges expire; and
 - the assumption that some form of generalised global carbon trading is in place by 2016;
- the failure to model the impact of a carbon tax on specific regions of Australia; and
- the decision not to release the full models used for public scrutiny.

Since the tabling of the Interim Report, the Joint Committee has conducted its inquiry into the draft bills and tabled its Advisory Report, and Senate Estimates hearings have allowed Committee members to further question the Minister for Finance and Deregulation, Senator the Hon. Penny Wong, and Treasury officials, and Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) officials about the modelling.

This further information has done nothing to dispel the committee's initial view that the government has moved with undue haste to implement this carbon tax.

The government has not allowed sufficient time for the proper consideration of its legislation, by the public or by the Joint Committee. As a result, in this committee's view, the Joint Committee failed to properly examine the draft Bills. Rather, it adopted a "see no evil, hear no evil, speak no evil" approach to the government's carbon tax.

The committee's Interim Report detailed concerns about the lack of transparency of the modelling. Information obtained at Estimates hearings only emphasised that the government has adopted a policy of preventing the full, independent scrutiny of the modelling. And it is clear, this was a government decision, not one made by the Treasury, which in other similar situations has taken steps to ensure its modelling is open to public review. In response to questions on releasing of the modelling, the government has dissembled and raised smoke screens in an attempt to avoid the real issue raised by its decision.

The committee is of the view that it now has an even stronger basis for making the recommendations about the modelling that it made in the Interim Report.

The trampling of democracy

The process for the development of the carbon tax has been deeply flawed. Prior to the 2010 Commonwealth Election the Prime Minister, the Hon. Julia Gillard MP, and her Deputy Prime Minister and Treasurer, the Hon, Wayne Swan MP, promised the Australian electorate that there would be no carbon tax.

After the election, on 24 February 2011, the Prime Minister announced that there would be a carbon tax. No details were released, with the electorate having to wait until 10 July 2011 for partial detail and only incomplete economic modelling. On 13 September 2011, the 19 Bills for the government's Clean Energy Future were introduced into the Parliament.

The 19 Bills were then pushed through a truncated Joint Committee for consideration. Many submissions were ignored and the 19 complex Bills and around 1100 pages of important law were quickly dealt with. The Joint Committee was so dominated by the government that not even the convention of an Opposition deputy chair was respected.

This Inquiry has sought to shine a torch into the dark places of the government's carbon tax. By receiving 102 submissions, as well as visiting regional Australia and conducting 13 public hearings, this committee has attempted to be a voice for Australians and to ensure proper scrutiny of the government's carbon tax. The committee's process contrasts with the methods adopted by the government.

In these circumstances, the committee extends its appreciation to those individuals and organisations that participated in this inquiry.

The government's disregard for the democratic process extends beyond the development of the carbon tax. While its effectiveness is questionable, it is clear that

by giving emissions permits the characteristics of private property, the government has sought to hinder the repeal of its legislation by a future parliament.

As mentioned previously, the government has succeeded in denying the public access to its carbon tax modelling. This has reduced public scrutiny of what the government has called a major economic transformation for Australia. Such restrictions have not applied to other major economic reforms.

Issues covered by this report

In this report:

- Chapter 2 highlights further issues with the Treasury's modelling that provide an even more compelling case to call into question the government's optimistic assessment of the impact of the carbon tax.
- Chapter 3 draws together a state-of-play on selected overseas emissions trading schemes and highlights events that have undermined these schemes and demonstrates potential risks that could derail Australia's attempts to source emissions abatement from overseas.
- Chapter 4 provides further evidence to support the view that the government cannot be relied upon to ensure effective implementations of its policies. The fundamental building block of the government's planned emissions trading scheme, the carbon unit, is to be personal property but the exact legal standing of that property is contested. While the government's efforts in this respect seem likely to be unsuccessful, it is clear that its intention is to undermine the scope future governments have to repeal this legislation without incurring massive compensation claims.
- Chapter 5 outlines the myriad of new regulators and agencies that are part of the new green bureaucracy. These new bodies represent a further risk to the Commonwealth Budget.
- Chapter 6 catalogues the extensive efforts and associated costs undertaken by the government that have failed to sustain, yet alone build, support for its carbon tax, which the Prime Minister had promised would not be imposed.

This report draws upon evidence obtained by the Joint Committee as well as information in the public domain and important insights gained during the Supplementary Budget estimates process of the week of 17 October 2011.

Recommendations of the Final Report

Recommendation 1

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

Recommendation 2

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

-
- the government release all of its modelling, including the actual models, datasets and specification used by the Treasury, to allow third party review; and
 - the government establish an Independent Expert Panel to review its modelling approach and framework.

Recommendation 3

The committee recommends that if the government proceeds with its carbon tax, that the relevant regulator be sufficiently resourced to minimise the risk of fraud or other undesirable activities that might undermine the integrity of the Australian carbon permits.

Recommendation 4

The committee recommends that the government carefully consider the risks and benefits from linking to foreign carbon markets and that comprehensive safeguards be put in place to minimise the risk to Australian purchasers of foreign carbon abatement units.

Recommendation 5

In the event that the government proceeds with the carbon tax, the committee recommends that clause 103 of the Clean Energy Bill 2011 be amended to ensure that a property right does not attach to permits and to make it clear that permits can be altered, repealed or revoked at any time without that amounting to an acquisition of property.

Recommendation 6

If the Clean Energy Future legislative package is passed by the Parliament, the committee recommends that the Senate review the conduct of relevant regulators.

Recommendation 7

If the Clean Energy Future legislative package is passed by the Parliament, the committee recommends that the Senate review the cost to the Budget of the Clean Energy Finance Corporation and the Australian Renewable Energy Agency given that between them they will be responsible for \$13 billion of expenditure.

Recommendation 8

The committee calls upon the government to carefully consider further expenditure on its so-called community education for the carbon tax and suspend further unnecessary advertising if the government's legislation passes the Parliament.

Recommendations of the Interim Report

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, 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;**
- **government establish an Independent Expert Panel to review its modelling approach and framework;**

-
- **Productivity Commission be asked to undertake a cost-benefit analysis of the proposed carbon tax;**
 - **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

Introduction

Terms of reference

1.1 On Thursday, 30 September 2010, the Senate established the Select Committee on the Scrutiny of New Taxes (the committee) 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.

1.2 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 is a further and final report setting out the committee's findings of its inquiry into a carbon tax.

Conduct of the inquiry to date

1.4 The committee tabled its very comprehensive interim report on the carbon tax, *The Carbon Tax: Economic pain for no environmental gain*, on Friday 7 October 2011. On the same day the Labor-Green dominated Joint Select Committee on Australia's Clean Energy Future Legislation also released its report about the carbon tax legislative package.

1.5 This final report of the committee on carbon pricing mechanisms provides some further assessments of the government's carbon tax and emissions trading scheme proposal in the context of issues that have emerged since the reports by those two committees have been released. This further report draws upon information that emerged during public discussions and evidence received by the Senate Supplementary Estimates Committees in the week of 17 October 2011.

Acknowledgement

1.6 The committee extends its appreciation to those who helped the inquiry.

Structure of the report

1.7 This report has 6 chapters:

- Chapter 2 provides further information about the government's failure to release all the necessary information about its carbon tax modelling preventing proper public scrutiny in the process;
- Chapter 3 provides further information issues related to the international carbon permit trading markets;
- Chapter 4 discusses the ongoing uncertainty surrounding the status of emissions units as personal property rights and the risks this poses to the planned future emissions trading scheme;
- Chapter 5 considers administrative issues associated with implementation of the government's proposed carbon tax, especially the rise of a new green bureaucracy to oversee the carbon tax and its administration; and
- Chapter 6 relates to the community's awareness and understanding of the carbon tax and emissions trading scheme and to government expenditure to promote its latest new tax.

Chapter 2

Government secrecy on Treasury Modelling Information preventing proper scrutiny

Introduction

2.1 This chapter highlights how the government's ongoing refusal to release relevant information about the Treasury modelling of the carbon tax is preventing proper public scrutiny.

2.2 Specifically, further information has emerged during Senate Estimates from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) and the Productivity Commission which put the government's refusal to release information into context. Their evidence shows that the government's refusal to release relevant information about the Treasury's carbon tax modelling is inconsistent with past practice, either by ABARES under the Howard Government, or by the Productivity Commission even today.

2.3 This chapter will revisit the decision by the government not to release the specifications and data sets used by the Treasury to model the impacts of the carbon tax. This issue was discussed in considerable depth in this committee's Interim Report – *The Carbon Tax: Economic pain for no environmental gain* (the Interim Report). However, information has come to light recently that warrants additional comment by the committee.

The Joint Select Committee's assessment of the Treasury's modelling

2.4 In the Advisory Report, the Joint Select Committee on Australia's Clean Energy Future Legislation (the Joint Committee) describes the Treasury's modelling as '[the] most reputable and thorough research on the effects of the legislation and pricing emissions on the Australian economy [that] has been conducted'.¹

2.5 It went on to comment in respect of criticisms of the modelling:

During the inquiry, the committee did not receive any alternative comprehensive modelling that was at variance with the Treasury's work. Therefore, the committee concludes that there is no evidence of significant errors in the Treasury's analysis and that its findings are generally sound.²

1 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, p. 43.

2 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, p. 45.

2.6 The Joint Committee acknowledges that it did receive criticism of the modelling. It stated:

The committee did receive criticisms of the modelling. One concern related to the Treasury's assumptions about progress in developing international emissions markets. This was raised by the National Lime Association and the Institute of Public Affairs.

The Treasury's response was what they have done is to 'use the Cancun pledges and operationalise them in our modelling', rather than make predictions about international agreement-making. The committee agrees that taking a formal statement by a country's government is a suitable way of developing assumptions.³

2.7 The committee considers that relying on the formal statements of governments as the only basis for developing assumptions on future behaviour over 40 years is a foolhardy approach. The government's economic modelling predicts events beyond the life of many existing governments. For example, the government's former Carbon Pollution Reduction Scheme (CPRS) modelling failed to forecast the failure of the Copenhagen talks. Closer to home, if this approach to modelling had been adopted in August 2010 then the assumption would have been that there would be no carbon tax under a government led by the Prime Minister, the Hon. Julia Gillard MP.

2.8 It is noticeable that the Institute of Public Affairs raised a number of concerns about the Treasury modelling in its submission and its evidence to the Joint Committee, however, the assumption that there will be uniform progress in the development of international emissions markets is the only criticism referred to in the Advisory Report. How it dealt with those comments is instructive of the Joint Committee's approach to criticism of the modelling.

2.9 In its submission, the Institute stated that the Treasury assumption that all countries would meet their Kyoto emissions reduction commitments 'is not widely shared' and that when used in modelling 'the numbers assume unanimity of action, without which very different outcomes would emerge'.⁴

2.10 The Institute also raised this issue in its evidence to the committee:

We know at the present time that that is not taking place. Only the EU has similar regimes envisaged, or at least legislated for. Secondly, it does involve also rapid technological development in carbon capture and storage and other renewable technologies, and there really is not any evidence that this is happening anyway.⁵

3 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, pp 45-46.

4 Institute of Public Affairs, *Submission 14*, p. 15.

5 Dr Alan Moran, Director, Deregulation Unit, Institute of Public Affairs, *Proof Committee Hansard*, 27 September 2011, p. 57.

2.11 A similar criticism of the modelling was made by the Australian Chamber of Commerce and Industry in its evidence to the Joint Committee:

Senator CORMANN: You mentioned Treasury modelling towards the end and that it did not assess the impact on small business. Taking a more general view, how plausible do you think Treasury's modelling assumptions are—for example, around their expectations on international action—and what are the implications of that?

Mr Evans: We are far from experts in assessing political movements internationally and when countries may or may not join an international carbon agreement. But when we look at our trade competitors—not our trade partners but our trade competitors: countries such as Brazil, Canada, South Africa and, to some extent, the USA—we cannot see any movement by them towards an international agreement. Our fundamental view is that if we move unilaterally and not in concert with, in particular, our trade competitors, then we are going to be at a substantial economic disadvantage.

Senator CORMANN: Given that Treasury has assumed, for example, that the US, Canada and others will have a comparable carbon price in place from 2015-16 onwards, would the effect of Treasury making that very heroic and unrealistic assumption be that the modelling has underestimated the impact of the carbon tax on the cost of production; on the cost of doing business; and on the cost to households, for that matter?

Mr Evans: Absolutely. For that reason, and for many others, they have substantially underestimated the economic dislocation associated with the carbon tax.⁶

2.12 The same issue was raised by the Australian Coal Association in its submission to the Joint Committee:

Decisions based on incomplete modelling

Clearly Australia should have a proper assessment of the desirability of imposing the proposed carbon tax. It is of deep concern that the non-transparent or “black box” Treasury modelling on which the scheme is based does not undertake any sensitivity analysis based on realistic assumptions about international abatement action. Such analysis should have been undertaken both to assess if the Government's proposal is in fact efficient or least cost and whether it is desirable for Australia to impose such a tax if many other countries, including the world's largest emitters and our coal export competitors, do not.

ACIL Tasman has advised ACA that Treasury has modelled two scenarios in which the rest of the world adopts coordinated carbon pricing and concurrently with Australia. But Treasury has not modelled, or if it has it has not released, the most relevant scenario, which is the one in which government imposes such a scheme and Australia's major resource

6 Mr Greg Evans, Director, Economics and Industry Policy, Australian Chamber of Commerce and Industry, *Proof Committee Hansard*, 26 September 2011, pp 31-32.

competitors do not. Moreover, Treasury's modelling is based on a range of assumptions that need to be tested.

It is important to undertake sensitivity analysis to assess the implications of more abatement being required in Australia and/or international permits costing more. There are sound reasons for considering that likely, including: continued widespread use of inefficient abatement policies internationally, as reported by the Productivity Commission; quantitative restrictions by the Australian Government on access to foreign permits; restrictions by other countries on their sales of permits; and restrictions placed by Australia on the acceptability of international units due to concerns about verification, monitoring and enforcement. Moving away from Treasury's carbon pricing assumptions risks higher job losses and less investment in the coal industry.⁷

2.13 Even in a submission which was otherwise favourable towards the Treasury, the Australian Industry Greenhouse Network raised a criticism of the modelling:

AIGN notes that the modelling so far released by the Treasury provides very little insight into the likely economic impacts on Australia. None of the scenarios modelled by Treasury address one of the most likely international outcomes — that being the Government's commitment to a -5% below 2000 emission unit budget by 2020 within a fragmented international agreement. The short to medium term economic costs are not measured by Treasury modelling and the environmental benefits remain very uncertain in the absence of a robust international agreement. To enable a transparent investigation of Treasury's modelling, the models and data actually used by Treasury need to be able to be accessed and peer reviewed.⁸

2.14 The Advisory Report contains no substantial analysis or examination of the Treasury assumption concerning international action to meet Kyoto commitments. The Joint Committee sought to dismiss criticisms of this aspect of the modelling with what this committee sees as sweeping, unsupported statements:

There are widespread and significant international efforts to reduce greenhouse gas emissions, and these are increasingly linked. Perceptions about a lack of coordinated international progress should not influence Australia's decision to act.

...

International efforts take different forms, and different countries are adopting measures appropriate to their particular circumstances.⁹

7 Australian Coal Association, *Submission 58*, pp 4-5.

8 Australian Industry Greenhouse Network, *Submission 33*, p. 5.

9 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, p. 45.

2.15 This committee examined international efforts to meet emission reduction targets in considerable detail in its Interim Report.¹⁰ It is unnecessary to repeat that evidence here. It is sufficient to indicate that this committee concluded that, at present, there was 'no foreseeable prospect of an appropriately comprehensive global agreement to price carbon dioxide emissions'.¹¹

2.16 Rather than address or examine this criticism, the Joint Committee merely accepted the Treasury assertion that it based its modelling 'on the best available information now, and that is all we can do. We cannot make definitive statements about what will happen'.¹²

Committee comment

2.17 The Joint Committee has taken the expedient step of ignoring all criticisms of the Treasury modelling, by simply asserting that there is no 'alternative comprehensive modelling' and taking that as settling the issue.

2.18 This committee is of the view that there are two errors with this approach. The first is that there is a simple reason why there is no 'alternative comprehensive modelling' to that done by the Treasury. As pointed out above, the Treasury has not released sufficient details of the modelling to enable peer review or public scrutiny of the modelling results.

2.19 As a result of this failure, it is self-evident that it is not possible for there to be 'alternative comprehensive modelling' that could credibly challenge the Treasury modelling conducted at the direction of the government.

2.20 The second error with the Joint Committee's approach is that, from the claimed lack of 'alternative comprehensive modelling', it concluded that 'there is no evidence of significant errors in the Treasury's analysis and that its findings are generally sound'. This conclusion is simply not sustainable, logically or based on the evidence.

2.21 Firstly, the Joint Committee ignored the abundant evidence available in the public arena from economists and industry experts which point out the many flaws in the Treasury's modelling. Secondly, it ignored the evidence provided to this committee, as discussed comprehensively in chapter 10 of the Interim Report. Thirdly, and most tellingly, it ignored even the evidence that the Joint Committee acknowledged it received.

10 Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, pp 6-28.

11 Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 38.

12 Dr David Gruen, Executive Director, Macroeconomic Group-Domestic, Department of the Treasury, *Proof Committee Hansard*, 26 September 2011, p. 5.

Submitting the modelling to public scrutiny

2.22 The above quote from the Australian Industry Greenhouse Network submission highlights the government's failure to release the specifications and data sets it used to modify the models it purchased from external sources, so that other economists could review its work and conduct their own modelling of the carbon tax.

2.23 In fact, evidence to the Senate Estimates Committee on 17 October 2011, quoted at some length below, shows that it was a decision by the government not to release the results of that modelling for public scrutiny. It is noteworthy that this issue is not addressed by the Joint Committee in the Advisory Report.

2.24 This committee attempted to get to the bottom of who was responsible for the decision not to release the modelling during its hearings. On 10 August 2011, a Treasury official told the committee:

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.¹³

2.25 Consequent upon that exchange, on 22 August 2011, the committee wrote to the Hon. Wayne Swan MP, Deputy Prime Minister and Treasurer, asking that:

...the MMRF-Green model, the GTEM model as well as any other relevant models and relevant assumptions used in those models to provide the results for the modelling of a \$23 per tonne carbon tax be provided to the Committee. To enable proper scrutiny of the potential impact of the carbon tax on the Australian economy and community it is essential that the committee have access to the modelling that underpins the carbon tax.¹⁴

2.26 On 5 September 2011, Mr Swan responding stating:

The modelling is built on the previous modelling undertaken in 2008, which has been extensively scrutinised and considered over the past three years. It provides important insights into the economic impact of carbon pricing at global, national, sectoral and household levels.

To ensure public transparency, the [Strong Growth, Low Pollution: Modelling a Carbon Price] report provides detailed information about the assumptions and frameworks used and the range of scenarios modelled to explore different environmental targets and design features of a carbon price scheme. A large amount of data from the report has been made

13 Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 30.

14 Letter from Senator Mathias Cormann, Chairman, Select Committee on the Scrutiny of New Taxes to the Hon. Wayne Swan MP, Deputy Premier and Treasurer, 22 August 2011.

available on the Treasury website. Additional reports commissioned from external consultants have also been made available. These include: detailed reports on the electricity generation sector from SKM MMA and ROAM Consulting; a detailed report on the road transport sector from the Commonwealth Scientific and Industrial Research Organisation; and detailed reports on the Carbon Farming Initiative from the Australian Bureau of Agricultural and Resource Economics and Sciences and the Department of Climate Change and Energy Efficiency.

The Government has asked Treasury to update the macroeconomic modelling to reflect the final policy design of the carbon price package, including the \$23 per tonne starting price that you referred to in your letter. The results of updated modelling are expected to match closely the results of the core policy scenario in the [Strong Growth, Low Pollution] report. Further information on that modelling will be available once it is completed.¹⁵

2.27 On 23 September 2011, the committee again asked Treasury officers about public access to the models. It was advised:

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 [Australian Bureau of Agricultural and Resource Economics and Sciences], 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.

15 Letter from the Hon. Wayne Swan MP, Deputy Premier and Treasurer, to Senator Mathias Cormann, Chairman, Select Committee on the Scrutiny of New Taxes, 5 September 2011.

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.¹⁶

2.28 In commenting on this aspect of the Treasury evidence, the committee's view was that:

...the Treasury officials provided incorrect advice to the Committee [and] Treasury's further replies on this issue were not helpful...quite contrary to the evidence Treasury provided...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.¹⁷

2.29 On 26 September 2011, the committee wrote to Treasury asking it two questions on notice:

Is the version of the GTEM model and the data and assumptions actually used by Treasury in its carbon pricing scheme work released in 2008 and 2011 publicly available? If so, where can it be purchased from?

Can you provide any other information that would assist interested stakeholders purchase the models used in the 2008 and 2011 carbon pricing modelling?¹⁸

2.30 On 14 October 2011, the Treasury responded stating:

The GTEM model, in common with other complex models, encompasses four components: model code, database', exogenous assumptions including scenario design assumptions; and software. The access arrangements for the GTEM model differ across the four components reflecting intellectual property and licensing arrangements.

The intellectual property of the GTEM model code rests with [ABARES].

...

The underlying GTEM database is a joint product of ABARES and the Global Trade and Analysis Project (GTAP). Release of the GTEM model database is therefore subject to licensing arrangements being made for the GTAP component.

The exogenous assumptions used in the ALPF and SGLP modelling exercise are explained in detail in the two published modelling reports.

16 Senator Ron Boswell, participating member of the 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. 30.

17 Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 224.

18 Letter from Senator Mathias Cormann, Chairman, Select Committee on the Scrutiny of New Taxes to the Department of the Treasury, 26 September 2011.

The software required to use the GTEM model is available for purchase from Monash University.

Any request for further information associated with the GTEM model is a matter for government, subject to licencing arrangements in the case of GTAP, and should be directed to the Deputy Prime Minister.¹⁹

2.31 On 12 October 2011, Senator Ron Boswell, a participating member of the committee, challenged Senator the Hon. Penny Wong, Minister for Finance and Deregulation, to release the modelling.²⁰

2.32 On 13 October 2011, the Chairman of the committee, Senator Mathias Cormann, directed a Question Without Notice and two supplementary questions to Senator Wong asking whether the models used by the Treasury would be made available for independent scrutiny. Minister Wong did not answer any of those questions directly.²¹

2.33 The issue was raised with ABARES at the Senate Estimates Committee hearing on 17 October 2011:

Senator CORMANN: Could ABARES today make a decision to release the GTEM model or is that now a matter for somebody else?

Mr Glyde: ...There are a number of elements that go into the operation of the model. One is the model. There is the data that comes from a source called GTAP. There are the changes that have been made in relation to some of the assumptions since 2007, some of which have been made by Treasury. Then there is some further work that has been done on the development of it. Given the shared nature of it and the complexity of it, the release of that information is a decision for government. And that is my understanding of the Treasury response to your original request.

...

Senator CORMANN: Has ABARES met with Treasury to discuss the public release of the GTEM model?

Mr Glyde: We have discussed with Treasury the release of the model.

Senator CORMANN: What was discussed?

Mr Glyde: The complexity of the request that you have put forward. As I tried to say before, a number of elements make up GTEM and it use: the model, the data that is supplied to it and other assumptions that are made. That is now shared. It is much more complex than it was when it was ABARES alone that using the GTEM model, as it did for many years.

...

19 Letter from Dr David Gruen, the Department of the Treasury, to Senator Mathias Cormann, Chairman, Select Committee on the Scrutiny of New Taxes, 5 September 2011.

20 *Senate Hansard*, 12 October 2011, p. 47.

21 *Senate Hansard*, 13 October 2011, pp 45-46.

Senator CORMANN: So which organisation would then be responsible for handling requests for the public release of the model—the GTEM model?

Mr Glyde: We would suggest that, as I said before, that is a whole-of-government matter. We would suggest that that would be a matter than in the first instance you might wish to address to the Department of the Treasury, but the response would be handled on a whole-of-government basis.

...

Senator CORMANN: Would ABARES itself have any objection to the government releasing the version of the GTEM model that Treasury used in its carbon tax modelling?

Mr Glyde: As I said before, that is a matter for a whole-of-government decision.

Senator CORMANN: But you as an agency have no objection?

Mr Glyde: What we are saying is that we would have no objection to the release of the base model. As we have shown before, we have done that in the past when it has been our responsibility. What I am trying to convey is that, now that the model, the assumptions and the data are a collective product, this is not a decision that ABARES can take alone.

Senator CORMANN: What you are really saying is that, now that further refinement has been made to the GTEM model, the lead agency from your point of view should be Treasury. Is that right?

Mr Glyde: That is correct, yes.

Senator CORMANN: I have a generic question. You are involved in quite a bit economic modelling, obviously. Is it your view that an independent third party would be able to obtain sufficient access to the GTEM model now to run the same modelling scenarios that Treasury ran to produce its carbon tax modelling report?

Mr Glyde: Probably not, in that the third party would need to obtain the GTAP database, which, as we have discussed, is done through a relatively straightforward licence arrangement. But to capture all of the modifications to the database that have been made over the years by ABARES and Treasury—the amplifications for different industry sectors—they would need information that has not yet been publicly released. Therefore, I do not think anyone could replicate the results at the moment.

Senator CORMANN: You are saying that, on the basis of the information that has been released so far, the Treasury carbon tax modelling cannot be properly scrutinised by third parties?

Mr Glyde: At the moment it is not possible to take the current version of GTEM, its data and the assumptions that are there inside it and run that model.

...

Senator CORMANN: Would you be able to provide us with information today? Specifically the date I am looking for is when consensus was reached between ABARES and Treasury that the release of the GTEM model was not something that ABARES could decide by themselves but that required a whole-of-government consideration to be led by Treasury, as you said earlier. Does that make sense?

Dr Sheales: I can answer that one: Friday, 7 October.

Senator CORMANN: It took until 7 October for you to reach that final consensus. Up until that time there was disagreement, was there?

Dr Sheales: No. We were going around talking about different aspects of the issue, along the line that we talked about this morning, where there was some intellectual input from Treasury as well as from ourselves, and we were not quite sure how best to handle that.

Senator CORMANN: When was the first discussion between ABARES and Treasury about how best to handle it?

Dr Sheales: I cannot give you a date. It is probably either late August or early September.²²

2.34 Senator Wong and Treasury officials were also asked about release of the modelling at the Estimates Committee hearing on 20 October 2011.

2.35 When asked why the government refuses to release all the modelling and codes to open the Treasury modelling to public scrutiny, the Minister was unable to provide a direct answer to the question. Rather Senator Wong fell back on three strategies:

- the response that Senator Wong had given Parliament on 13 October 2011 – that the government 'has released an extraordinary amount of information to ensure transparency';
- taking questions on notice; and
- the reply that there was no reason to release all the material as, Senator Wong argued, 'no amount of data released by the government will shift your [the coalition's] position'.²³

2.36 For its part, the Treasury could not state with any certainty whether it had released all the modelling or all the exogenous assumptions it had made in its modelling and had to take those questions on notice. It did admit that the last time it released the model codes for the GTEM model were in 2007, though it could not say

22 Senator Matthias Cormann, Member, Rural Affairs and Transport – Legislation Committee, Mr Phillip Glyde, Deputy Secretary and Executive Director ABARES and Dr Terry Sheales, Acting Deputy Executive Director, *Proof Estimates Hansard*, 17 October 2011, pp 45-48.

23 Senate Economics Legislation Committee, *Proof Estimates Hansard*, 20 October 2011, pp 30-31 and p. 34.

whether this was under the Howard Government or under the Rudd Government.²⁴ As a matter of fact, the decision to make the model available for license was taken under the Howard Government and reversed subsequent to the 2007 election of the Rudd Government.

2.37 The government's approach in relation to the carbon tax was contrasted to its approach to work undertaken by the Productivity Commission. At the Estimates Committee hearing on 20 October it was asked about the release of modelling it had undertaken using the same Monash University model that the Treasury had used for some its carbon tax modelling:

Senator CORMANN: They would be available on request. That is what I wanted to know. In 2007 the Productivity Commission undertook some economic modelling in relation to the national reform agenda. You used the MMRF model for that work. Is that right?

Mr Gretton: That is correct.

Senator CORMANN: And you contracted with Monash University to assist with the development of the MMRF for that particular work?

Mr Gretton: That is correct.

Senator CORMANN: Did you include a provision in the contract with Monash University for the MMRF model that was used to be made publicly available?

Mr Gretton: That was part of the contract.

Senator CORMANN: So that provision was included at your request, was it?

Mr Gretton: Yes.²⁵

...

Senator CORMANN: So have you signed a contract yet with Monash University in relation to the COAG reform work?

Mr Gretton: There is a contract, yes.

Senator CORMANN: And there is a similar provision in that contract for the public release of the MMRF model which was included in the contract for the national reform—

Mr Gretton: Yes, there is such a provision.

Senator CORMANN: And that was, again, included at the request of the Productivity Commission?

24 Senator Matthias Cormann, Member, Economics Legislation Committee, and Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division, Department of the Treasury, Senate Economics Legislation Committee, *Proof Estimates Hansard*, 20 October 2011, p. 33.

25 Senator Matthias Cormann, Member, Economics Legislation Committee, and Mr Paul Gretton, Assistant Commissioner, Productivity Commission, Senate Economics Legislation Committee, *Proof Estimates Hansard*, 20 October 2011, p. 55.

Mr Gretton: It was included as part of the negotiation between the Centre of Policy Studies and the commission.²⁶

2.38 On 18 June 2010, during his tenure as Minister for Finance the current Minister for Small Business, Senator the Hon. Nick Sherry, wrote to the Productivity Commission, forwarding the terms of reference for its inquiry into the impacts and benefits of the Council of Australian Governments (COAG) reforms, stating:

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. [emphasis added]

Committee comment

2.39 It is hardly credible that senior Treasury officers would not have known that:

- without all the specifications and datasets, which were not publicly available, the models alone would not allow someone to 'replicate the results' of the modelling; and
- discussions about releasing the modelling had begun by early September 2011.

2.40 The committee is of the view that this confirms that the Treasury evidence to it was not open and transparent; that it was very carefully tailored not to be misleading but also not to answer the questions that were put to Treasury in a full and frank manner. It is also striking, and a cause of concern, that Treasury categorically assured the committee on 22 August 2011 that third parties could obtain all the access required to test Treasury's results even though at that stage, a decision about complete release of the relevant information had, according to subsequent statements by Treasury and ABARES, not been made.

2.41 That said, that decision not to release the complete modelling was not made until 7 October 2011. Ultimately the decision not to release all the relevant modelling information for public scrutiny was made by the government. It does raise the question what the Gillard Government has got to hide.

2.42 The evidence cited above confirms that, despite consistent and rigorous efforts by this committee, the government has no intention of releasing the modelling for public scrutiny before the Senate considers the carbon tax bills. Instead the government continues to obfuscate and delay on this issue.

26 Senator Matthias Cormann and Mr Paul Gretton, Senate Economics Legislation Committee, *Proof Estimates Hansard*, 20 October 2011, pp 56-57.

2.43 In the Parliament and at the Estimates Hearing, the Minister, Senator Wong, used a number of tactics to avoid answering questions about the release of the Treasury modelling. In her responses, Senator Wong makes two errors. Firstly, it is no answer to say that the government has already released large amounts of information. Even assuming that that is the case, ABARES have admitted that '(a)t the moment it is not possible to take the current version of GTEM, its data and the assumptions that are there inside it and run that model'.

2.44 Secondly, Senator Wong appears to miss the point of why it is important for the modelling to be reviewed independently. The carbon tax is a massive and important undertaking by the government, with significant short and long-term effects on the Australian economy. The Senate is a house of review. It is, therefore, important to its fulfilling of that vital roles that all Senators, and indeed the public, have the benefit of modelling that has been independently scrutinised before voting on the legislation.

2.45 The government's approach to the release of the Treasury's modelling of the carbon tax stands in stark contrast to the approach to modelling by the Productivity Commission. Not only does the Commission have release clauses written into its contracts to use the modelling of an organisation like Monash University, but it also understands that scrutiny of the modelling is important to both the Parliament and the community.

2.46 The committee is of the view that the government's approach on this issue:

- is not consistent with its own previous actions in instances where less was at stake, such as in relation to modelling by the Productivity Commission;
- ignores principles of good government and transparency, in that it prevents the Senate properly fulfilling its constitutional role as a house of review; and
- strongly suggests it has something to hide.

Cherry picking the best pieces of the modelling

2.47 As part of her Second Reading speech for the Clean Energy Bill 2011, the Prime Minister, the Hon. Julia Gillard MP, told the Parliament that her government's carbon tax legislation is:

A plan to cut carbon pollution by at least 160 million tonnes a year by 2020.²⁷

2.48 As a result:

27 The Hon. Julia Gillard MP, Prime Minister, *House of Parliament Hansard*, 13 September 2011, p. 9845.

Employment is projected to grow strongly with a carbon price. Around 1.6 million jobs to be created to 2020...a further 4.4 million to 2050. (note: ellipses are in original)

...

Real gross national income per person is expected to increase from today's levels by around \$9,000 per person to 2020.²⁸

2.49 The government's target is to reduce Australia's carbon emissions by 5 per cent compared to 2000 levels, by 2020.²⁹ This is a target that is shared by the Opposition. It requires a reduction in emissions of 159 million tonnes.³⁰

2.50 According to the Treasury's modelling, as at 2010 Australia's domestic emissions are 578 million tonnes. By 2020 the picture in relation to Australia's carbon emissions is forecast to be:

- Domestic emissions, without a carbon tax, of 679 million tonnes;
- Domestic emissions, with a carbon tax, of 621 million tonnes (meaning a direct drop in domestic emissions of 58 million tonnes);
- Minus internationally sourced abatement equal to 94 million tonnes;
- Resulting in a total emissions reduction, under the carbon tax, of 152 million tonnes.³¹

2.51 In respect of the economic indicators, the Treasury baselines and forecasts are:

- Baseline Gross National Income (GNI), per person, before a carbon tax, as at 2010: \$55,800;
- Projected GNI, per person, in 2020, without a carbon tax: \$65,100;
- Projected GNI, per person, in 2020, with a carbon tax: \$64,800;
- Baseline employment, before a carbon tax, as at 2010: 11.4 million people;
- Projected employment, in 2020, without a carbon tax: 13 million people;
- Projected employment, in 2020, with a carbon tax: 13 million tonnes.³²

28 The Hon. Julia Gillard MP, Prime Minister, *House of Parliament Hansard*, 13 September 2011, p. 9850.

29 The Department of the Treasury, *Strong growth, low pollution: Modelling a carbon price - Overview*, 2011, p. 1.

30 The Department of the Treasury, *Strong growth, low pollution: Modelling a carbon price - Overview*, 2011, p. 6.

31 The Department of the Treasury, *Strong growth, low pollution: Modelling a carbon price (Update) - Overview*, 2011, p. 5.

32 The Department of the Treasury, *Strong growth, low pollution: Modelling a carbon price (Update) - Overview*, 2011, p. 5.

Table 2.1: Comparison of baseline 2010 (before a carbon tax) and projected 2020 (with and without a carbon tax) emissions and economic indicators³³

	Emissions (million tonnes)				GNI (\$,000s)		Employment (%)	
	Without a carbon tax	With a carbon tax	Overseas sourced abatement	Total emissions reduction	Without a carbon tax (Per person)	With a carbon tax (per person)	Without a carbon tax	With a carbon tax
2010	578	---	---	---	55.8	---	11.4	---
2020	679	621	94	152	65.1	64.8	13.0	13.0

Committee comment

2.52 The comparisons made by the Prime Minister in her Second Reading speech about the effect of the carbon tax on domestic emissions and the economy, in the form in which they were made, do not stand up to close examination.

Domestic emissions

2.53 In relation to domestic emissions, the Prime Minister compared the 2020 forecast situation without a carbon tax to the 2020 forecast situation with both a carbon tax and overseas sourced abatement. What this comparison fails to make clear is that:

- even with a carbon tax, Australia's emissions will actually rise by 43 million tonnes of carbon dioxide equivalent between 2010 and 2020; and
- any reduction in global emissions will be as a result of overseas sourced abatement, at considerable cost to the Australian economy.

GNI per person

2.54 However, when it came to the effect of the carbon tax on GNI, the Prime Minister contrasted the 2010 GNI per person to the 2020 forecast GNI per person with a carbon tax. In making that comparison the Prime Minister ignored Treasury's 2020 forecast for GNI without a carbon tax. This would have been a more appropriate and less misleading comparison.

2.55 What the comparison made by the Prime Minister fails to make clear is that Australia's GNI per person with a carbon tax will actually be \$300 lower than it would

33 Source: The Department of the Treasury, *Strong growth, low pollution: Modelling a carbon price (Update) - Overview*, 2011, p. 5.

be without a carbon tax. Moreover, that is likely to be a very significant underestimate of the impact of the tax, as it assumes similar schemes are being deployed globally.

Employment

2.56 In relation to employment, the Prime Minister has compared the 2010 employment number to the 2020 forecast employment number with a carbon tax. At first glance, it is striking that the Treasury forecasts that in 2020 employment would be 13 million with or without a carbon tax.

2.57 However, it is not appropriate to make this comparison at all. This is because the employment number is, in fact, not a forecast and cannot be phrased as an outcome of the government's policy. Rather, the Treasury's modelling assumes 'in the long run that there is an adjustment of the labour market back to a structural rate of unemployment'. This assumption is made regardless of whether a carbon tax is introduced.³⁴

2.58 This assumption was examined critically in the Interim Report, which concluded:

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, 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.³⁵

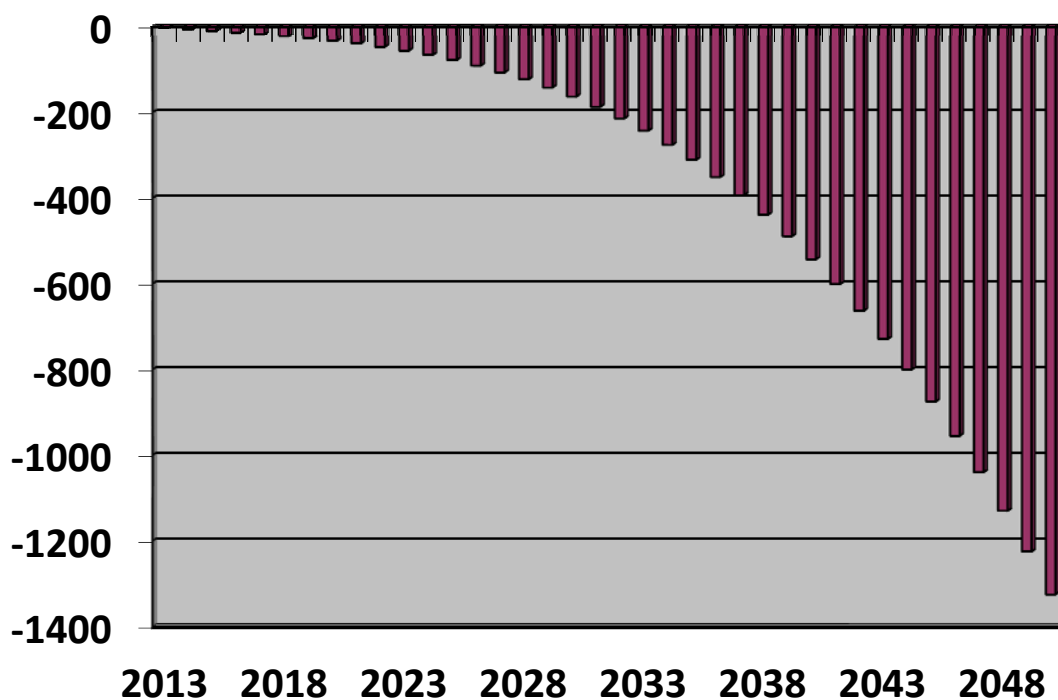
2.59 The committee is of the view that the Prime Minister has cherry-picked comparisons to give the best possible impression about the effect of the government's carbon tax on Australia's domestic emissions (as distinct from global emissions) and on the nation's economic position in 2020. In reality the position is quite different.

The effect of the carbon tax on the economy

2.60 In its Interim Report, the committee referred to evidence from Professor Henry Ergas to the effect that, based on the Treasury's modelling, it is likely the carbon tax will impose a \$1 trillion cost on the Australian economy. Graph 2.1 illustrates the effect:

34 Ms Meghan Quinn, General Manager Macroeconomic Modelling Division, the Treasury, *Committee Hansard*, 10 August 2011, p. 17.

35 Senate Select Committee on New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, 2011, pp 241-243.

Graph 2.1: How much will the carbon tax reduce our economic wealth by?³⁶

2.61 Professor Ergas' evidence to the committee was:

What is available that Treasury have indeed released, and I congratulate them on doing so, is a spreadsheet that is similar to a spreadsheet that they had released for the CPRS model and that spreadsheet allows you to look at the change in the value of GDP under the base case, as it were, and with the so-called core policy, which is the primary abatement scenario that they model, and also under the so-called high-price scenario, which is where you go for more ambitious abatement. So what you can do, Senator, is you can use that spreadsheet—and you do need to make a number of assumptions—to calculate the value today of the change in GDP under those alternative carbon tax scenarios. To put it in perhaps simplistic terms—but this may help explain what is going on—say that in 2020 GDP would otherwise have been \$2 trillion and instead, under the modelling of the core policy, it is \$1.8 trillion, and in 2030 it would have been \$3 trillion and instead is \$2.6 trillion, you can take that difference and express it as if it were a value today. You can bring it back to the present. To do that you have to find some way of adding up amounts at different points in time. You have to take some account of the time value of money. In the calculation that I set out, I used a discount rate—that is, the assumed time value of money, as it

36 The Department of the Treasury, *Strong Growth, Low Pollution: Modelling a carbon price*, Chart 5.13, http://www.treasury.gov.au/carbonpricemodelling/content/chart_table_data/chapter5.asp (accessed 28 October 2011)

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.³⁷

2.62 The only response to this statement from the government was by the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, who claimed 'They [the committee] have shonked up the numbers'.³⁸ The committee notes that Mr Combet has produced no evidence to discredit Professor Ergas' calculations or support his assertion.

2.63 Moreover, this issue was raised with Treasury officials at the Senate Estimates Committee hearing on 20 October 2011:

Senator CORMANN: Using the same discount rate as was recommended by the climate change adviser to the government, Professor Garnaut, what is the cumulative figure that Treasury comes up with?

Ms Quinn: Professor Garnaut used two discount rates in his analysis—a lower number of 1.35 and a higher number of 2.65—

Senator BOSWELL: 1.35 what?

Ms Quinn: 1.35 per cent real and 2.65 per cent real. If you do the cumulative deviation in GDP over time using the 1.35 per cent discount rate, you get \$0.9 trillion in 2009-10 dollars. If you use a cumulative deviation of GDP using a 2.65 per cent discount rate, you get a number that is one-third smaller than that.

2.64 The Treasury, therefore, admitted that using one of the discount rates utilised by Professor Garnaut, the effect on the budget could be \$0.9 trillion, within the range suggested by Professor Ergas.

2.65 It is correct that, as Ms Quinn says and as Professor Ergas had noted, using a higher discount rate reduces the present value of the income loss. However, if a higher discount rate is used, then the benefits of the emissions reductions from the tax (which all occur post-2100) are virtually zero, while the costs of the tax remain significant. In other words, using a higher discount rate does not strengthen, but rather greatly weakens, the case for the carbon tax. Further, these calculations only estimate the economic loss of introducing a carbon tax to 2050. The carbon tax will lead to lower investment and a smaller Australia capital stock, which will mean lower economic output beyond 2050 as well.

37 Prof. Henry Ergas, *Committee Hansard*, 10 August 2011, p. 68.

38 David Wroe, 'Coalition MPs put higher cost on carbon', *Sydney Morning Herald*, 8 October 2011, p. 4, <http://www.smh.com.au/environment/climate-change/coalition-mps-put-higher-cost-on-carbon-20111007-11dm9.html> (accessed 21 October 2011).

Committee comment

2.66 The resolution that established the Joint Committee tasked it to 'inquire into and report on the provisions' of the Gillard Government's 18 clean energy bills and the Steel Transformation Plan Bill 2011. The Treasury's modelling of the government's carbon tax provides the foundation upon which the tax is built. Without the modelling the government would not be able to proceed with its Clean Energy Plan.

2.67 The Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, has described the government's carbon tax package as 'one of the most important environmental and economic reforms in this nation's history'.

2.68 However, the Joint Committee has devoted barely seven pages of its report to a review of the Treasury's modelling, of which less than two pages consider criticisms of the modelling.

2.69 This committee is at a loss to understand how this could be considered anything more than a cursory review of the Treasury modelling.

2.70 In its Interim Report, this committee highlighted how the government had moved with undue haste to implement this carbon tax – how it had not allowed sufficient time for the proper consideration of its legislation, by the public or by the Joint Committee; how it had not even introduced bills to implement all aspects of the plan; and how there was a lack of transparency about the modelling that underpinned the plan.

2.71 The Advisory Report does nothing to dispel this view.

2.72 In the Interim Report, this committee recommended that:

...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.

2.73 The government has continued to refuse to release the Treasury modelling and supporting data in such a way as to allow it to be independently scrutinised. This hampers public debate on the effect of the carbon tax on the economy and runs contrary to what it has done in relation to another major government economic modelling body, the Productivity Commission.

2.74 The committee is of the view that it now has an even stronger basis for making these recommendations than it did at the time of the Interim Report.

Recommendation 1

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

Recommendation 2

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

- **the government release all of its modelling, including the actual models, datasets and specification used by the Treasury, to allow third party review; and**
- **the government establish an Independent Expert Panel to review its modelling approach and framework.**

Chapter 3

The international trading of carbon emission permits

Introduction

3.1 This chapter discusses the shortcomings of international carbon markets. The experience of international markets is important because of how the Government's proposed scheme will transition from a fixed price on carbon to a flexible price under an Emissions Trading Scheme (ETS) on 1 July 2015.¹ From 1 July 2012 to 30 June 2015, the carbon price will be set by the Australian Government. After 1 July 2015, the price will become flexible, largely determined by the market. The proposed scheme will allow up to 50 per cent of permits to be imported from ETSs overseas, therefore, it is important that these schemes be trustworthy.

3.2 Current experience in overseas jurisdictions appears to show that credible, stable and reliable mechanisms to facilitate the international trade in permits are not emerging. This raises serious questions about the reliability of the Treasury's modelling and the actual operation of the proposed Australian regime from 1 July 2015, which draws so heavily on overseas abatement to offset Australia's domestic emissions.

3.3 During the flexible price period, which commences on 1 July 2015, the Treasury's core policy scenario involves up to 50 per cent of all carbon permits, with some restrictions, being sourced internationally up to 2020, when the prescribed amount will be reviewed by the Climate Change Authority.² These permits will be sourced from 'credible international carbon markets'.³ The committee thinks the concept of 'credible' markets is an important issue to clarify.

3.4 In a public hearing held by the Joint Select Committee on Australia's Clean Energy Future Legislation, the Secretary of the Department of Climate Change and Energy Efficiency listed the schemes which he envisaged Australia's ETS linking with at the beginning of the flexible price period. They were the European Union Emissions Trading Scheme (EU ETS), the Kyoto Protocol's Clean Development

1 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 123.

2 Department of the Treasury, 21 September 2011, *Strong Growth, Low Pollution: Modelling a Carbon Price - Update*, p. 6, http://www.treasury.gov.au/carbonpricemodelling/content/update/downloads/Modelling_update.pdf, (accessed 26 October 2011).

3 Clean Energy Bill 2011, *Explanatory Memorandum*, pp 36-37.

Mechanism (CDM), and the New Zealand ETS.⁴ As will be discussed, there are serious issues with the first two of these 'credible' schemes.

3.5 There are also many questions surrounding the credibility and the stability of the international market for carbon units. The Australian ETS could be significantly undermined by several international forces:

- market instability and immaturity;
- EU ETS dominance;
- structural flaws with the EU ETS;
- uncertainty of ETS establishment in many countries;
- uncertainty over what constitutes a carbon permit; and
- 'carbon criminals'.

3.6 These critical issues are explored below.

Market instability and immaturity

3.7 Several carbon markets have suffered instability, with European and North American experiences offering stark examples. Such instability will impact the Australian ETS as up to 50 per cent of carbon permits will be sourced from foreign ETSs.

3.8 The European experience so far with one particular type of carbon unit, the Certified Emission Reduction credit (CER), is of great concern to the committee. A CER is a specific project-based carbon credit, and is one of several carbon units issued under the CDM.⁵ The CDM allows companies to off-set their emissions, by surrendering the CER credit instead of a carbon permit:

Large emitters in developed countries can finance individual projects to reduce greenhouse gas emissions in developing countries if this is cheaper than reducing their own emissions.⁶

3.9 In 2010, the market size of primary CERs fell by 46 per cent, representing a loss in value of nearly US\$1.5 billion. Furthermore, the market has declined persistently: down 59 per cent in 2009 and down 12 per cent in 2008. Today, primary

4 Mr Blair Comley, Secretary, Department of Climate Change and Energy Efficiency. *Joint Select Committee on Australia's Clean Energy Future Legislation, Committee Hansard*, 21 September 2011, p. 3.

5 United Nations Framework Convention on Climate Change, 2006, *Report of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol on its first session, held at Montreal from 28 November to 10 December 2005*, p.7, <http://cdm.unfccc.int/Reference/COPMOP/08a01.pdf#page=6>, (accessed 20 October 2011).

6 Neuhoff, K. 2011. *Climate Policy after Copenhagen: The Role of Carbon Pricing*. Cambridge University Press, New York, p. 1.

CERs account for less than 1 per cent of the global carbon market. In 2005 primary CERs comprised 23 per cent of the global market; in 2006, 19 per cent.⁷ As is discussed later in this chapter, EU ETS permits comprise 84 per cent of current global carbon trading; with the inclusion of CDM units, the proportion of the global carbon market driven by the EU ETS increases to 97 per cent, as the EU ETS is where most CERs are used.⁸

3.10 As noted by the Energy Supply Association of Australia (ESAA), there has already been price instability within carbon trading markets between different types of carbon units.⁹ ESAA makes a further point that not only will this price instability continue, but that the number of forces creating instability will increase, as national and multilateral institutions make country-specific decisions which cannot be anticipated.

3.11 The committee is disturbed by how quickly a previously-significant source of carbon units can be devalued, and is further concerned by what the implications are for an Australian ETS where up to 50 per cent of carbon units could be sourced from overseas markets suffering from such instability.

3.12 Opening in October 2003, the North American focussed Chicago Climate Exchange (CCX) traded in carbon units called Carbon Financial Instruments (CFIs), with the CCX's membership comprised of corporations as well as jurisdictions:

Chicago Climate Exchange (CCX) was established in 2003 as a voluntary greenhouse gas emission reduction program. Market participants included major corporations, utilities and financial institutions with activities in all 50 United States, 8 Canadian provinces and 16 countries. The total program baseline covered 700 million metric tons of carbon dioxide (CO₂) - equal to roughly one-third the size of Europe's cap and trade program.¹⁰

3.13 Soon after opening, the CCX experienced considerable expansion. As discussed in the World Bank's June 2011 report:

As new regional initiatives began to take shape in the U.S., membership of the CCX grew from 127 members in January 2006 to 237 members by the end of the year while new participants expressed their interest in familiarizing themselves with emissions trading.¹¹

7 World Bank, June 2011, *State and Trends of the Carbon Market*, pp 47-48.

8 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 9.

9 Energy Supply Association of Australia, *Supplementary Submission 60a*, p. 13.

10 Chicago Climate Exchange, 30 June 2011, *Fact Sheet: Operating leading environmental markets globally*, https://www.theice.com/publicdocs/ccx/CCX_Fact_Sheet.pdf, (accessed 18 October 2011).

11 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 74.

3.14 Despite this interest, the CCX's CFI price dropped from a mid-2008 high of US\$7.50 to a low of just US\$0.05 in November 2010.¹² After trading for seven years, in late 2010 the CCX closed.¹³ As discussed later in this chapter, three other ETS schemes in North America look likely to either collapse or be ineffectual.

3.15 The committee believes that ETS participation or intention to participate is, by itself, not sufficient to sustain a market approach to abatement. The committee recognises the aspirations which many countries have stated they wish to make to emissions reduction. In a submission provided to this committee, it was noted that:

As of mid March 2010, 108 countries, covering 81.6 per cent of world emissions, have pledged or aspired to cuts that will mean emissions will peak before 2020.¹⁴

3.16 However, a 2011 survey by the World Bank's Carbon Finance Unit found approximately 75 per cent of respondents were pessimistic 'that a binding international agreement could be achieved in the short term' when asked about the likely success of an international agreement when the current commitment period of the Kyoto Protocol expires on 31 December 2012.¹⁵

3.17 The effects of this uncertainty are serious; persisting doubts over what international agreements will exist after 2012 'have left Europe alone to absorb the supply of project-based CERs in the post-2012 environment'.¹⁶

3.18 The United Kingdom's House of Commons Environmental Audit Committee has also recently expressed concern about internationally-sourced carbon permits:

Allowing the use of international offset credits in that second budget period [2013 – 2017] would make achievement of subsequent carbon budgets more difficult because it could reduce pressure to secure domestic action.¹⁷

3.19 The UK Government's second carbon budget period runs from 2013 to 2017. It is during this period that Australia's ETS would commence (July 2015).

12 *The New York Times*, 'Chicago Climate Exchange Closes Nation's First Cap-And-Trade System but Keeps Eye to the Future', 3 January 2011, <http://www.nytimes.com/cwire/2011/01/03/03climatewire-chicago-climate-exchange-closes-but-keeps-ey-78598.html?pagewanted=all>, (accessed 18 October 2011).

13 *The Financial Times*, 'End of US carbon trading looms', 1 November 2010, <http://www.ft.com/intl/cms/s/0/3fe91576-e5de-11df-af15-00144feabdc0.html>, (accessed 18 October 2011).

14 National Institute of Economic and Industry Research, *Submission 3 (attachment 1)*, p. ii.

15 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 17.

16 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 47.

17 House of Commons Environmental Audit Committee, *Seventh Report on Carbon Budgets*, 11 October 2011, <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenvaud/1080/108005.htm#a5>, (accessed 13 October 2011).

3.20 The UK's Department of Energy and Climate Change (DECC) has noted weaknesses with an ETS:

...it is worth noting that ETSs are one policy tool among others, and that in some specific national contexts, they might not be a suitable mitigation policy. Although the UK remains committed to market-based instruments globally as a cost-effective tool that can help increase global ambition, market-based instruments are only a mean to an end. ETSs are not a silver bullet; they will have to be implemented in combination with other policy tools (e.g. policy tools that directly impact behavioural change and promote investments in new low carbon technologies).¹⁸

3.21 As the DECC states, an ETS is just one element of a greenhouse gas reduction program, and it only works if other elements are also introduced. If further policies to augment their ETSs are not introduced by other countries, the rationale underpinning a global ETS is weakened.

Dominance of the EU ETS

3.22 The current value of EU ETS allowances is estimated at around US\$120 billion (currently about €85 billion, or about AU\$112 billion).¹⁹ The EU emits between 12 and 14 per cent of global emissions.²⁰ The EU ETS currently applies to 'about 45 per cent of the energy-related CO₂ emissions of the region', only including some sectors of industry.²¹ The committee received evidence in this inquiry that an internationally-linked Australian ETS would allow Australian businesses to 'access lowest cost abatement through global carbon markets over the longer-term' from other ETSs, such as the EU ETS.²²

3.23 The proportional dominance that the EU ETS has in global carbon trading is concerning. Allowances under the EU ETS account for 84 per cent of all carbon trading in the world.²³ When including the CDMs discussed earlier, this EU ETS dominance increases to 97 per cent.²⁴ With the closure of the Chicago Carbon

18 UK Parliament's House of Commons Energy and Climate Change Select Committee, written evidence received from the UK Government's Department of Climate Change, document 1, <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/writev/1476/contents.htm>, (accessed 28 October 2011).

19 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 9.

20 World Resources Institute, 2011, *Climate Analysis Indicators Tool, Version 8.0*, <http://cait.wri.org/cait.php?page=comp coun>, (accessed 25 October 2011).

21 International Energy Agency, 2011, *CO₂ Emissions from Fuel Combustion, Highlights (2011 Edition)*, p. 12, <http://www.iea.org/co2highlights/co2highlights.pdf>, (accessed 20 October 2011).

22 The Institute of Chartered Accountants in Australia, *Submission 32*, p. 2.

23 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 9.

24 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 9.

Exchange in 2010, delays in other schemes, and the lack of progress elsewhere, this EU ETS dominance appears entrenched.

3.24 Furthermore, the environmental impact of the EU ETS is potentially very low. An August 2010 report estimated that the EU ETS (operating since 2005) will reduce emissions by 0.3 per cent by 2012, relative to 1990 levels.²⁵ The World Bank has stated that during 2010 and 2011, the EU ETS 'continued to be plagued by market irregularities' requiring successive regulatory interventions.²⁶

Structural flaws with the EU ETS

3.25 Several recent incidents in the EU ETS have concerned this committee.

3.26 In March 2010 it was discovered that Hungary had been re-selling CERs already submitted by companies to meet their emissions targets. The European Commission quickly made regulatory amendments in order to prevent 'CER recycling' from happening again.²⁷

3.27 In mid-2010, Bulgaria had its Kyoto Protocol carbon trading rights suspended by the UN Climate Change Secretariat, which administers the Kyoto Protocol.²⁸ The suspension followed a finding that Bulgaria violated UNFCCC reporting rules regarding its 2009 annual report to the UNFCCC. In an audit, the secretariat found that 'the individual review report contains a question which triggers the compliance mechanism of the Protocol'.²⁹ This suggests to the committee that the Climate Change Secretariat considered the Bulgarian annual report to be unreliable.

3.28 Incidents such as these in Hungary and Bulgaria could affect an Australian ETS. As noted in 2007 by the UK Parliament's Joint Committee on the Draft Climate Change Bill, the standards of country B's ETS matter if it is linked to country A's ETS:

Any linking of different schemes needs to be carefully planned and monitored... This is because one of the two main virtues of a trading

25 Exigency Management, *Submission 37*, p. 1.

26 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 25.

27 European Commission, 18 November 2010, *Communication from the Commission to the European Parliament and the Council: Towards an enhanced market oversight framework for the EU Emissions Trading Scheme*, http://ec.europa.eu/clima/news/docs/communication_en.pdf, (accessed 18 October 2011).

28 *Reuters*, 29 June 2010, 'Bulgaria suspended from U.N. Kyoto carbon trade', <http://www.reuters.com/article/2010/06/29/us-bulgaria-co2-suspension-idUSTRE65S3RU20100629>, (accessed 26 October 2011).

29 UNFCCC, Compliance Committee of the Kyoto Protocol, 29 June 2010. *Informal information note by the secretariat – The compliance procedure with respect to Bulgaria*, http://unfccc.int/files/kyoto_protocol/compliance/questions_of_implementation/application/pdf/update_to_informal_information_note_bgr_after_final_decision_20100629.pdf, (accessed 26 October 2011).

scheme – that it provides “certainty about the level of carbon dioxide emissions that will be achieved as the outcome is fixed and mechanisms are in place to avoid the outcome not being achieved” – can become compromised if it accepts credits generated from another scheme which has a more relaxed (or non-existent) cap, or less robust auditing procedures.³⁰

3.29 Discussing the EU ETS in 2007, the UK Parliament's Joint Committee on the Draft Climate Change Bill expressed concern that national governments in the EU had over-allocated carbon permits above their national emissions in Phase I of the EU ETS (2005 – 2007). This surplus of permits meant that UK efforts to reduce emissions had been undermined by the structural deficiency of the EU ETS:

Thus it appears that, rather than funding emissions reductions elsewhere, the UK's purchase of [EU] ETS credits has merely bought what has been described as “hot air” – a notional saving that does not actually represent any reduction in global emissions.³¹

3.30 The impact of this over-allocation persists today. The over-allocation of permits was discussed in a submission to this inquiry, which stated that 'one report suggest that there is currently a surplus of 1.4 billion permits – or 3 years of supply' in the EU ETS.³² In another submission to this inquiry, it was noted that over-allocation subverts the international carbon market:

...global carbon trading at the international level is vulnerable to ‘hot air’ type situations in which excess permits...can corrupt the entire system.³³

3.31 In a September 2011 report, the UK Parliament's House of Commons' Environmental Audit Committee noted that over-allocation had allowed companies to accumulate hundreds of millions of permits worth billions of Euros, negating any incentive to reduce their emissions.³⁴

3.32 Phase II of the EU ETS (2008 – 2012) also has serious structural deficiencies, albeit of a different nature. This flaw surrounds the use of permits issued under the

30 UK Parliament, *Report of the Joint Committee on the Draft Climate Change Bill, Volume 1*, 3 August 2007, p. 32, <http://www.publications.parliament.uk/pa/jt200607/jtselect/jtclimate/170/170i.pdf>, (accessed 14 October 2011).

31 UK Parliament, *Report of the Joint Committee on the Draft Climate Change Bill, Volume 1*, 3 August 2007, p. 32, <http://www.publications.parliament.uk/pa/jt200607/jtselect/jtclimate/170/170i.pdf>, (accessed 14 October 2011).

32 Exigency Management, *Supplementary Submission 37a*, p.3.

33 Centre for Energy and Environmental Markets, *Submission 27*, p. 6.

34 UK Parliament, House of Commons Environmental Audit Committee, *Seventh Report on Carbon Budgets*, 11 October 2011, <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenvaud/1080/1080.pdf>, (accessed 13 October 2011).

Kyoto Protocol being used in the EU ETS (and indeed, any emissions reduction scheme):

One issue here is that CDM [Clean Development Mechanism] credits are issued [in Phase II] against emissions saving projects in developing countries which do not themselves have binding emissions caps under Kyoto; thus one cannot be certain as to their overall contribution to reducing global emissions.³⁵

3.33 As heard by the UK Parliament's Joint Committee on the Draft Climate Change Bill, these CDM credits are also potentially bogus:

...the economic incentives offered by the CDM appear actually to be encouraging the building of refrigerant plants in the developing world, simply in order that the HFC [hydrofluorocarbons] by-products from the plant can be incinerated, and the credits generated from this sold at a large profit.³⁶

3.34 Contrasting these details with comments from the secretary to the Department of Climate Change and Energy Efficiency that he envisaged the Australian ETS linking up with the CDM and the EU ETS because they are 'credible' schemes, the committee regards the reliance of the Australian ETS on the CDM and the EU ETS as yet another flaw in the government's policy.

3.35 The committee notes that it is not alone in this view. Both the UK Parliament's Committee on Climate Change, and the House of Commons' Environmental Audit Committee recommended to the UK Government that international permits not be used.³⁷ Phase III of the EU ETS will give 164 industry sectors up to 100 per cent of their permits for free. This includes more than 80 per cent of companies covered by the EU ETS.

Uncertainty of ETS establishment in many countries

3.36 In May 2011, a Productivity Commission report noted that both Japan and South Korea had delayed implementing previously-announced ETSs.³⁸

35 UK Parliament, *Report of the Joint Committee on the Draft Climate Change Bill, Volume 1*, 3 August 2007, p. 32, <http://www.publications.parliament.uk/pa/jt200607/jtselect/jtclimate/170/170i.pdf>, (accessed 14 October 2011).

36 UK Parliament, *Report of the Joint Committee on the Draft Climate Change Bill, Volume 1*, 3 August 2007, pp 32–33, <http://www.publications.parliament.uk/pa/jt200607/jtselect/jtclimate/170/170i.pdf>, (accessed 14 October 2011).

37 UK Parliament, House of Commons Environmental Audit Committee, *Seventh Report on Carbon Budgets*, 11 October 2011, <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenvaud/1080/1080.pdf>, (accessed 13 October 2011).

38 Productivity Commission, *Carbon Emission Policies in Key Economies*, May 2011, p. xvii.

3.37 In a submission from the Minerals Council of Australia, it was noted that in December 2010 the Japanese government had withdrawn the draft national ETS legislation from the parliament, postponing it to at least 2013.³⁹ The Association of Mining and Exploration Companies also noted Japan has postponed its plans for carbon pricing.⁴⁰ Japan is the world's fifth largest emitter of greenhouse gases.⁴¹

3.38 Similarly, South Korea delayed the introduction of a national ETS. Due to start in 2013, the scheme would have applied to 60 per cent of national emissions.⁴² As discussed at a public hearing, despite the South Korean government offering to provide 90 per cent of permits free, South Korean industry rejected this offer and the introduction of the national scheme has been postponed until at least 2015.⁴³

3.39 As already discussed in this chapter, the Chicago Climate Exchange closed in late 2010. However, in the North American region, three other emissions trading schemes have recently experienced significant difficulty.

3.40 The Western Climate Initiative (WCI) is comprised of four Canadian provinces (British Columbia, Manitoba, Ontario and Québec), and seven states in the United States of America (Arizona, California, Montana, New Mexico, Oregon, Utah and Washington). As well as these 11 participating jurisdictions, there are sixteen observer jurisdictions in Canada, the USA and Mexico.⁴⁴

3.41 Yet the WCI is unstable. The Productivity Commission notes that the intention of the WCI is to 'reduce emissions to 15 per cent below 2005 levels by 2020'.⁴⁵ Despite this intention, the Productivity Commission noted two emerging but significant flaws: firstly, that 'only California is fully committed to implementing an ETS by 2012' and secondly, that there will be no price and abatement improvement in emissions for 2012 due to recommendations made by the WCI itself. Furthermore, four participating jurisdictions have withdrawn or stated their intention to withdraw from the scheme.⁴⁶

39 The Minerals Council of Australia, *Submission 57*, p. 19.

40 Association of Mining and Exploration Companies, *Supplementary submission 20*, p. 12.

41 Australian Government, 2011, *Department of Climate Change Fact Sheet: Australia: Part of the Climate Problem – Part of the Solution*, p. 1, <http://climatechange.gov.au/en/government/international/global-action-facts-and-fiction/australia-problem-solution.aspx>, (accessed 26 October 2011).

42 The Minerals Council of Australia, *Submission 57*, p. 19.

43 Senator Mathias Cormann, Chair, Senate Select Committee on New Taxes, *Committee Hansard*, 10 August 2011, p. 43.

44 Western Climate Initiative website, *WCI Partners and Observers*, <http://www.westernclimateinitiative.org/wci-partners-and-observers-map>, (accessed 25 October 2011).

45 Productivity Commission, *Carbon Emission Policies in Key Economies*, May 2011, p. 20.

46 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 32.

3.42 Similarly, on the other side of the North American continent, the Regional Greenhouse Gas Initiative (RGGI) scheme is unstable. The RGGI is comprised of ten north-eastern states in the United States of America (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont).⁴⁷ Pennsylvania has observer status, as do the three Canadian provinces of Québec, New Brunswick, and Ontario.⁴⁸

3.43 Yet once again, and despite all the interest, the market experienced significant difficulties. The RGGI carbon price has bottomed-out at US\$1.89, which was the scheme's floor-price.⁴⁹ Furthermore, several jurisdictions are either unclear about their commitment or have announced intention to withdraw.⁵⁰ In May 2011 the Governor of New Jersey announced the state's plans to withdraw from the RGGI by the end of 2011.⁵¹ New Hampshire also appears likely to withdraw.⁵²

3.44 When operational, the Midwestern Greenhouse Gas Reduction Accord (MGGRA) was comprised of six states in the United States of America (Illinois, Iowa, Kansas, Michigan, Minnesota and Wisconsin) and the Canadian province of Manitoba.⁵³ Three other states in the United States of America and a Canadian province have observer status. In the beginning of 2011, it was reported that the governors of several MGGRA jurisdictions announced they would not pursue the cap-and-trade dimension of the scheme.⁵⁴ The MGGRA website was closed in January 2011, and the World Bank notes that 'MGGRA appears no longer functional with cap-and-trade off the agenda'.⁵⁵

3.45 It is clear to the committee from these recent events that the appetite of many jurisdictions for pursuing the ETS platform is diminishing.

47 Regional Greenhouse Gas Initiative website, *Program Overview*, <http://www.rggi.org/design/overview>, (accessed 25 October 2011).

48 Regional Greenhouse Gas Initiative website, *Program Contacts by State*, http://www.rggi.org/Program_Contacts_By_State, (accessed 25 October 2011).

49 Point Carbon, 9 September 2011. *RGGI auction clears at \$1.89 amid low turnout*, <http://www.pointcarbon.com/news/1.1581766>, (accessed 25 October 2011).

50 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 33.

51 *The New York Times*, 26 May 2011, 'Christie Pulls New Jersey From 10-State Climate Initiative', http://www.nytimes.com/2011/05/27/nyregion/christie-pulls-nj-from-greenhouse-gas-coalition.html?_r=2&ref=nyregion, (accessed 25 October 2011).

52 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 33.

53 The Pew Centre for Global Climate Change website, *Midwest Greenhouse Gas Reduction Accord*, http://www.pewclimate.org/what_s_being_done/in_the_states/mggra, (accessed 26 October 2011).

54 Point Carbon, 25 February 2011, *Midwest US ditches carbon market, focuses on jobs*, <http://www.pointcarbon.com/pages/shop/1.1510367>, (accessed 26 October 2011).

55 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 32.

Uncertainty over what constitutes a carbon permit

3.46 The UNFCCC is currently reviewing methodologies for several elements of the CDM.⁵⁶ The World Bank has noted the increasing unsuitability of the CDM scheme to lowering global emissions:

...the CDM is simply not designed to drive the structural transformation of industry in developing countries that the transition to a low-carbon economy requires. By definition, offset mechanisms such as the CDM cannot reduce global emissions in net terms.⁵⁷

3.47 Under Phase II of the EU ETS (2008 – 2012) EU member states in the EU ETS permitted (on average) 13.8 per cent of emissions permits to come from the CDM.⁵⁸ However, the EU ETS will restrict the use of CDM permits under Phase III (2013 – 2020).⁵⁹ It is unclear to the committee what proportion of the EU ETS will be filled by the CDM in Phase III.

3.48 The committee has noted the lack of clarity around the international regulatory regime for the CDM from 2013 onwards, after the conclusion on 31 December 2012 of both Phase II of the EU ETS, and the current commitment period of the Kyoto Protocol.⁶⁰

3.49 Given the importance of the CDM to the EU ETS, the outcome of the UNFCCC review process, the transition to Phase III of the EU ETS and the next commitment period of the Kyoto Protocol, these events may significantly impact on the price of EU emissions permits. Tellingly, the World Bank noted forecasts which predict that prices for a particular type of CDM permit (the CER discussed earlier in this chapter) will continue to decline in Phase III.⁶¹

3.50 As well as the two UK Parliamentary reports discussed earlier, the National Institute of Economic and Industry Research (NIEIR) also noted that CDM permits which are imported into developed countries may well undermine emissions abatement.⁶² As well as providing its own macroeconomic arguments against importing carbon permits, NIEIR also referenced the UK Parliament's Committee on Climate Change report from October 2009, which recommended that the UK scheme not allow import permits (such as the CERs in the CDM) because of their potential to

56 United Nations Framework Convention on Climate Change, 2011, <http://cdm.unfccc.int/methodologies/index.html>, (accessed 20 October 2011).

57 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 17.

58 Neuhoff, K. 2011. *Climate Policy after Copenhagen: The Role of Carbon Pricing*. Cambridge University Press, New York, p. 64.

59 World Bank, June 2011, *State and Trends of the Carbon Market*, pp 13-14.

60 National Institute of Economic and Industry Research, *Submission 3*, p. 72.

61 World Bank, June 2011, *State and Trends of the Carbon Market*, pp 50-51.

62 National Institute of Economic and Industry Research, *Submission 3*, pp 71-72.

delay domestic emissions reductions because cheap import credits (such as CERs) can be used to maintain the financial viability of high emitters.⁶³ This would make future emissions targets unrealistic, and make future reductions more expensive.

3.51 This is further exacerbated by the lack of certainty which has plagued the CDM since its inception.⁶⁴ The current state of play, as noted by NIEIR, is that the CDM 'was not extended at the Copenhagen conference, and also that it is unlikely to be included in the approved programs of pro-abatement countries'.⁶⁵

3.52 How this will affect the global situation is unclear, which only adds to the uncertainty surrounding the Australian Government's Clean Energy Future scheme.

'Carbon Criminals'

3.53 The EU ETS scheme has suffered repeated cyber-criminal attacks. This vulnerability persists, despite concerted efforts by the European Commission and EU member states.

3.54 In mid-January 2011, it was discovered that €45 million worth (about AU\$60 million⁶⁶ at the time) of EU Emission Allowance Units (EUA) had been stolen from the national registries of five EU countries. As a result, EU spot trade was suspended.⁶⁷

3.55 In November 2010, cyber-criminals accessed EU ETS registry accounts in Romania, stealing 1.6 million EUAs.⁶⁸ These EUAs were worth €15 million, and belonged to a cement maker, Holcim.⁶⁹ In May 2011, 72 per cent of the nearly 400,000 suspected EUAs which had been submitted to the EU ETS for 22 emission sites to cover their 2010 emissions were identified as having been stolen from Holcim.⁷⁰

3.56 After being stolen, the Holcim EUAs had been blacklisted. However, this did not stop the cyber-criminals from selling the EUAs; nor did it protect companies from

63 National Institute of Economic and Industry Research, *Submission 3*, p. 71.

64 Professor Warwick McKibbin, *Supplementary Submission 25a, Attachment 5*, p. 11.

65 National Institute of Economic and Industry Research, *Submission 3*, p. 72.

66 Historical exchange rates have been sourced from the exchange rate data of the Reserve Bank of Australia, available online: <http://www.rba.gov.au/statistics/hist-exchange-rates/>

67 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 41.

68 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 41.

69 *Bloomberg News*, 2 December 2010, 'EU Carbon Dioxide Emissions Permits Stolen From Romanian Unit of Holcim', <http://www.bloomberg.com/news/2010-12-01/romania-s-holcim-says-eu-carbon-permits-stolen-from-its-account.html>, (accessed 18 October 2011).

70 Point Carbon, 24 May 2011. *Table: 72 per cent of suspect EUAs surrendered belonged to Holcim*, <http://www.pointcarbon.com/news/1.1542379?date=20110524&sdsc=1>, (accessed 18 October 2011).

buying these EUAs in good faith. Six utilities and an infrastructure provider fell for this scam, buying the stolen permits and submitting them to the EU ETS.⁷¹

3.57 Also in November 2010, the German EU ETS registry was closed after being infected with a 'Trojan' computer virus called 'Nimkey'.⁷²

3.58 In early 2010, a phishing scam led to several EU ETS registries being temporarily closed after millions of Euros worth of carbon units were stolen.⁷³ This crime occurred despite the EU revising its internet security guidelines in January 2009 due to widespread phishing attacks on users of EU ETS registries in 2008 and 2009.⁷⁴

3.59 According to the European law enforcement agency, Europol, European taxpayers lost €5 billion (between AU\$8 billion and AU\$10 billion during that period) to EU ETS "carousel" fraud in just 18 months up to December 2009, out of a total EU ETS worth around €90 billion at the time.⁷⁵ Several European countries were targeted, among them the Netherlands, the United Kingdom, France, Denmark and Belgium.

3.60 The carousel scam involves criminals buying carbon units in EU countries without a Value Added Tax (VAT), importing and then selling the units in an EU country with a VAT added to the price of the carbon unit, but then pocketing the VAT instead of paying it to the relevant taxation authority.⁷⁶ It is termed a 'carousel' fraud because the commodity goes round and round. Initially, criminals import a carbon unit from a country without a VAT into a country with a VAT. Next, they repeatedly on-sell the unit through a series of conspirator companies. At each sale the price of the carbon unit increases; these increases also increase the absolute value of the VAT. In the final stage, the final company in the chain of the carousel fraud reclaims the final (vastly inflated) VAT amount from the government, and then disappears before the fraud is discovered. The scam occurs rapidly, is difficult to prove, and taxpayers foot the bill, because the VAT reimbursement comes from government coffers.

71 Point Carbon, 19 May 2011. *Update: More blacklisted EUAs surrendered*, <http://www.pointcarbon.com/news/1.1538851?date=20110519&sdtc=1>, (accessed 19 October 2011).

72 World Bank, June 2011, *State and Trends of the Carbon Market*, p. 41.

73 BBC News, 3 February 2010. *Phishing attack nets 3 million Euros of carbon permits*, <http://news.bbc.co.uk/2/hi/8497129.stm>, (accessed 18 October 2011).

74 European Union, 4 February 2010. Press release 'Emissions trading: Commission takes action over cyber attacks on EU ETS account holders', <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/125>, (accessed 18 October 2011).

75 *The Guardian Newspaper*, 14 December 2009, 'European taxpayers lose €5bn in carbon trading fraud', <http://www.guardian.co.uk/business/2009/dec/14/eu-carbon-trading-fraud>, (accessed 18 October 2011).

76 *The Guardian Newspaper*, 3 December 2009, 'Copenhagen summit: Denmark rushes in laws to stop carbon trading scam', <http://www.guardian.co.uk/environment/2009/dec/03/copenhagen-summit-carbon-trading-scam>, (accessed 18 October 2011).

3.61 In the first half of 2009, French authorities suspected carousel fraud was occurring in the French carbon trading exchange, BlueNext, which experienced a surge in trading of 'average daily volumes of 9.4 million in May, up from less than 7 million in the first four months of the year'.⁷⁷ As a consequence, carbon permits were made VAT-exempt in France. The fraud was estimated at more than €150 million (about AU\$270 million at the time).⁷⁸

3.62 In September 2009, the European Commission announced an overhaul to its VAT system to counter carousel fraud.⁷⁹ Several EU member states subsequently changed their national tax laws in 2009, with carbon trading volumes dropping by up to 90 per cent.⁸⁰ Despite Europol's warning and some EU members amending their tax laws, 12 months later, in December 2010, criminals were still using this scam, attempting to net €500 million in Italy alone (about AU\$670 million at the time).⁸¹

3.63 In an Australian context, the complexity of building a capability to monitor criminality and to integrate this capability into an already complex ETS model is fraught, and is an invitation to carbon criminals. It also means that agencies other than the Clean Energy Regulator and the Climate Change Authority, such as the Attorney General's Department, the Australian Crime Commission, Crimtrac, Austrac, the Australian Tax Office, the Australian Federal Police, the Australian Securities and Investments Commission, the Australian Prudential Regulation Authority, and a myriad of other federal and state agencies, will need to be involved in surveillance of the market and pursuing criminals. The committee is concerned that these agencies will not be adequately and practically resourced ahead of the launch of the flawed scheme, despite the Joint Committee's noting the provisions in the bills for

77 *Reuters*, 8 June 2009, 'France makes CO2 credits VAT-exempt to avoid scam', <http://www.reuters.com/article/2009/06/08/us-carbon-blunext-idUSTRE55726W20090608>, (accessed 18 October 2011).

78 *Le Figaro Newspaper*, 11 December 2009, 'Marché de CO2: les fraudeurs à la TVA mis en examen', http://recherche.lefigaro.fr/recherche/access/lefigaro_fr.php?archive=BszTm8dCk78atGCYonbyzsFQE4Y6PyMx8DJbgWM7ihowFb2ntzQXTCAYoV4gUrYu2IGtjAq08M_per_cent3D, (accessed 19 October 2011).

79 *The Guardian Newspaper*, 29 September 2011. *Brussels targets carbon trading fraud ahead of Copenhagen summit*. Available online: <http://www.guardian.co.uk/business/2009/sep/29/carbon-trading-carousel-fraud-eu>, (accessed 18 October 2011).

80 Europol, 28 December 2010, Press release 'Further investigations into VAT fraud linked to the carbon emissions trading system', <https://www.europol.europa.eu/content/press/further-investigations-vat-fraud-linked-carbon-emissions-trading-system-641>, (accessed 18 October 2011).

81 Europol, 28 December 2010, Press release 'Further investigations into VAT fraud linked to the carbon emissions trading system', <https://www.europol.europa.eu/content/press/further-investigations-vat-fraud-linked-carbon-emissions-trading-system-641>, (accessed 18 October 2011).

cooperation between the Clean Energy Regulator and some of these agencies mentioned above.⁸²

3.64 Furthermore, the committee is concerned by the potential cumulative effects of such fraud, were it to happen here. As discussed earlier, Europol quantified EU ETS carousel frauds as netting criminals € billion in only 18 months to December 2009. This is in a scheme which raises approximately €500 million a year in revenue.⁸³ The Australian Government estimates that Australian carbon permit revenues will be around \$9 billion a year in the last year before the ETS (2014 – 2015).⁸⁴ When the fixed price period transitions to the flexible price period, the potential windfall for criminals is significant.

3.65 The committee is concerned that such a rushed policy could result in huge losses to the Australian taxpayer in the initial years of the scheme. If losses here are comparable to international experiences, over the first few years of the scheme criminals could net hundreds of millions of dollars from the Australian taxpayer.

3.66 For this reason, the committee is concerned that the government's plans do not involve the sufficient resourcing and training of all the agencies mentioned above to deal with the complex frauds used by carbon criminals. The committee regards these capabilities as likely being required from the very first day of the Australian ETS, so that agencies can successfully anticipate and prevent the Australian taxpayer and Australian businesses from being defrauded.

Committee comment

3.67 As discussed in this chapter, many emissions reduction schemes around the world have stumbled or fallen. This increases the risks to Australia for relying on internationally-sourced permits, given the failings or failures of these schemes.

3.68 An Australian ETS which relies on internationally-sourced carbon permits will be exposed to destabilising forces over which the Australian Government has little, if any, control.

3.69 Carbon permit price instability and plummeting values, questionable conduct by foreign carbon permit registries, deeply-flawed types of carbon credits, global market uncertainty, carbon criminals and regulatory overstretch all threaten Australian businesses. The scale of the Australian ETS means these forces also threaten the financial security of the Australian people.

82 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, p. 86.

83 Minerals Council of Australia, *Submission 57*, p. 8 and p. 15; see also Minerals Council of Australia, *Supplementary Submission 57b*, p. 7.

84 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 41.

3.70 Many governments around the world are all too familiar with poorly planned policies and fatally flawed schemes. It is the view of this committee that the Australian Government should not be so bent on joining their ranks.

Recommendation 3

The committee recommends that if the government proceeds with its carbon tax, that the relevant regulator be sufficiently resourced to minimise the risk of fraud or other undesirable activities that might undermine the integrity of the Australian carbon permits

Recommendation 4

The committee recommends that the government carefully consider the risks and benefits from linking to foreign carbon markets and that comprehensive safeguards be put in place to minimise the risk to Australian purchasers of foreign carbon abatement units.

Chapter 4

Property Rights

Introduction

4.1 This chapter examines the issue of property rights attaching to carbon units and the ramifications that may have if a future government seeks to reverse the Gillard Government's proposed carbon tax and emissions trading scheme.

4.2 The issue considered in this chapter has become a much vexed question in recent times. It was addressed, in brief, in the committee's Interim Report – *The Carbon Tax: Economic pain for no environmental gain* – and raised before the Joint Select Committee on Australia's Clean Energy Future Legislation (the Joint Committee), where it was not resolved. In that light, the committee feels property rights in carbon units requires further consideration.

Carbon units and property rights

Background

4.3 The government's proposed carbon tax is structured such that it will require emitters to acquire carbon units from the Clean Energy Regulator and then surrender those units to meet their obligations under the clean energy mechanism.¹ The legislative framework that has been drafted to give effect to this aspect of the carbon tax scheme is set out in Division 3 of Part 4 (Carbon Units) of the Clean Energy Bill 2011 (the Bill).

4.4 Although all of the clauses that Part 4 contains are detailed and complex to account for the transition from a fixed price carbon tax to a floating emissions trading scheme, one particular feature of the legislative design that has attracted significant commentary of late is clause 103, which specifies that a carbon unit is personal property.

4.5 The Explanatory Memorandum to the Bill seeks to explain the intent of clause 103:

Transparent and secure property rights over and legal interests in carbon units will promote confidence in the integrity of the units and reduce uncertainty for their holders, and further promote confidence in the development of the market for carbon units.²

1 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 117.

2 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 121.

4.6 It was this committee, in its Interim Report, that first cited concerns with the government's proposal to attach property rights to carbon units. Evidence provided to this committee suggested that enshrining such a feature in law may have unintended consequences:

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.³

4.7 The committee's concern is that by attaching property rights to carbon units, any future compulsory acquisition of carbon units by a government would create a liability to payment of compensation under subsection 51(xxxi) of the *Commonwealth of Australia Constitution Act 1901* (The Constitution). Subsection 51(xxxi) of The Constitution provides the Parliament with the power to make laws relating to:

... the acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws⁴

4.8 This concern was again raised with the Joint Committee. The Joint Committee sought to clarify this matter throughout the course of their inquiry and sought the views of legal experts who appeared before their committee.

Certain Uncertainty

4.9 The legal experts who appeared before the Joint Committee were of the view that there is doubt as to whether or not compulsory acquisition of carbon units would give rise to compensation given that the creation of property has occurred through statute rather than common law.⁵ As a result, they suggested that clarification is necessary:

CHAIR: As a legal adviser and dealing with businesses in this space already, have you looked at this issue of personal property and the impact it would have? And has a view been formed with the people you represent, as opposed to your law firm, on how it would work and all the rest of it?

3 Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 43.

4 Subsection 51(xxxi), *Commonwealth of Australia Constitution Act 1901*.

5 Professor Lee Godden, Director, Centre for Resources, Energy and Environmental Law, Melbourne Law School, University of Melbourne, Ms Noni Shannon, Special Counsel, Norton Rose, *Joint Select Committee on Australia's Clean Energy Future Legislation, Proof Committee Hansard*, 26 September 2011, p. 53.

Ms Shannon: As to advising business, there is a benefit that they see from it being personal property. There is a certainty around the right, for example, to take security over it, to trade it and to carry it as an asset or a liability on their books. They consider it to be a positive that it is personal property.

Prof. Godden: What needs to be understood is that it is personal property and it is created as a particular form of statutory property. It does not necessarily have all the attributes that at common law are understood to attach to personal property. So I think we need some clarification around those issues. I am flagging that perhaps more needs to be clarified here because, if we look at other instances where we have had resources attributed as private property or as property—and here I am drawing on water trading examples—the High Court has not interpreted them, in certain instances, as having the same characteristics as at common law. **So I do think there is clarity needed around what is intended with the designation of personal property.**⁶ [emphasis added]

4.10 On further questioning as to whether or not acquisition of these property rights through extinguishing the carbon unit regime would constitute the acquisition of property, and therefore require compensation on 'just terms', conflicting views would suggest that there is a degree of uncertainty surrounding this issue:

Senator BIRMINGHAM: And of course this is of curiosity in that it is property that is being created to offset a liability that the companies who receive these permits would otherwise have. In your learned opinions, if the liabilities were extinguished by some future legislative means would there be a problem with extinguishing the property simultaneously?

Ms Shannon: To pick up on Professor Godden's comment previously, which made reference to the water rights that we have in each of the state based schemes: each of those are rights, and they look and feel very much like a property right—they are registered, there is legal title to those rights. But the courts have consistently held that they are not a property right subject to just-terms compensation on the extinguishment of those rights and the entitlement of those rights. We have not looked at that particular issue—if the liability were to be extinguished, whether the right could also be extinguished—but it is a statutory scheme established purely by statute and not based in the common law like our common law real property rights are. So it is open to statute to obviously abolish the scheme as well. We have not looked, as I said, though, at the issue of compensation.

Mr CHRISTENSEN: The parliamentary secretary for climate change has stated that these units are property rights in their nature; are you saying that that is not the case?

6 Ms Anna Burke MP, Chair, Joint Select Committee on Australia's Clean Energy Future Legislation, Professor Lee Godden, University of Melbourne, Ms Noni Shannon, Norton Rose, *Joint Select Committee on Australia's Clean Energy Future Legislation, Proof Committee Hansard*, 26 September 2011, p. 53.

CHAIR: Again, it is a bit of a difficulty if they have not seen the information. I have not seen the information you are asserting.

Mr CHRISTENSEN: These units are not property in their own nature; they are property by legislative means.

Ms Shannon: They are property by legislative means and they are different from property in real property which comes from the common law, basically.

CHAIR: But that is not uncommon, as you have said, in respect of water rights; it is not extraordinary—

Mr Young: And offshore exploration rights.⁷

4.11 Mr Grant Anderson of the Law Council of Australia suggested that the just terms compensation provision of subsection 51(xxxi) of The Constitution would not be 'enlivened' should the carbon unit scheme be repealed in future as repeal would not amount to an acquisition of property:

For the just terms provisions to be enlivened, there has to be a transfer of property from one entity to another. If you were, for example, to repeal the legislation, these carbon units would still have a separate life, I guess, out there, but there would not—in my view, at least—be any acquisition which would enliven those just terms, because there is no transfer of the property. It has just lost value.⁸

4.12 It could be expected that that outcome would be challenged by those entities left with worthless carbon units.

4.13 Senator Milne, Deputy Chair of the Joint Committee, sought to clarify how that outcome would result:

Senator MILNE: Mr Anderson, you said a moment ago that, in the event that a scheme was abolished or repealed, the permit would lose value—as opposed to not requiring compensation. So are you are saying that, if a company spends money buying permits and the scheme is abolished, they would not receive any compensation; they would just lose a massive investment?

Mr Anderson: That is correct, because under the Commonwealth Constitution, for it to enliven the requirement for just terms acquisition, there has to be a transfer of property from the entity that owns that property

7 Mr George Christensen, Member Joint Committee on Australia's Clean Energy Future Legislation, Senator Simon Birmingham, Member, Joint Committee on Australia's Clean Energy Future Legislation, Professor Lee Godden, University of Melbourne, Ms Noni Shannon, Norton Rose, Mr Douglas Young, Chairman, Climate Change Law Working Group, Law Council of Australia, *Joint Select Committee on Australia's Clean Energy Future Legislation, Proof Committee Hansard*, 26 September 2011, p. 53.

8 Mr Grant Anderson, Member Business Law Section Working Group on Climate Change Law, Law Council of Australia, *Joint Select Committee on Australia's Clean Energy Future Legislation, Proof Committee Hansard*, 26 September 2011, p. 54.

to, say, the Commonwealth. If you merely repeal the legislation, there is no transfer of property; you just have the carbon units sitting out there. They are valueless because there is no liability to use them to acquit—

Senator MILNE: So all those companies that are required to buy permits who had bought permits would suffer a very substantial loss under that policy?

Mr Anderson: Under that scenario—if that were to be the case.⁹

4.14 The Joint Committee in its report, however, did not canvass these concerns or conflicting views but rather preferred the view that the object of clause 103 of the Bill is to create certainty and avoid any unfortunate consequences of fraud, as has been experienced in Europe in recent times.¹⁰

4.15 The Joint Committee concluded that:

The effect of clause 103 of the Clean Energy Bill 2011 is to make clear that a carbon unit issued under the mechanism is an item of personal property capable of being owned and transferred from one person to another for the purposes of the mechanism. This is intended to clarify the status of the units and provide confidence in their integrity under the mechanism. It also provides clarity on the status of units for the purposes of using them as security or creating equitable interests in them.¹¹

Committee comment

4.16 As a general matter, the distinction between property rights created by statute and rights created under the common law is not necessarily helpful in resolving the issue of the potential consequences of future repeal of the legislative scheme. It is clear, for example, that intellectual property rights, though largely statutory in nature, are capable of benefiting from the protection of subsection 51(xxxi) of The Constitution.

4.17 Similar issues to those canvassed here were raised in 2009 when the Parliament was considering the Carbon Pollution Reduction Scheme (CPRS). In that case, the scheme, through legislation, sought to lock in a pollution reduction target, the concern being that if future governments sought to amend that target, such action

9 Senator Christine Milne, Deputy Chair, Joint Select Committee on Australia's Clean Energy Future Legislation, Mr Grant Anderson, Law Council of Australia, *Joint Select Committee on Australia's Clean Energy Future Legislation, Proof Committee Hansard*, 26 September 2011, p. 54.

10 Mr Martin Wilder, Partner, Baker and McKenzie, *Joint Select Committee on Australia's Clean Energy Future Legislation Committee Hansard*, 26 September 2011, p. 53.

11 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, paragraph 4.43, p. 75.

could trigger a requirement to pay compensation under subsection 51(xxxi) of The Constitution.

4.18 Legal opinion on this aspect of the CPRS identified these concerns:

The government's power to toughen the CPRS once it has begun is further limited by cl 94, declaring AEU's [Australian Emissions Units] to be "personal property". According to both the White Paper and the Explanatory Memorandum, the intention here was to provide maximum security and certainty in AEU's, promoting investor confidence in these instruments. However, it is worth noting that in most emissions trading schemes that have preceded the CPRS tradable permits were limited to licenses to emit, rather than full-fledged proprietary rights. The importance of this proprietary designation lies in the way it limits the Commonwealth's ability to alter or acquire AEU's subsequent to issuing them...Rights conferred by statute are not necessarily covered by s 51(xxxi), but nor are they necessarily excluded from its protection. Whether they are covered depends on the terms of the statute; in particular, whether it creates rights with a degree of permanence and stability, or rights that are "inherently susceptible of variation". The definition of "acquisition" is also broadly defined, extending to restrictions on property rights that confer a benefit on the Commonwealth, regardless of whether that benefit "correspond[s] precisely" with the restricted right.

AEU's are clearly intended to attract this protection... This legal conclusion has important political ramifications, because if the government should wish to recall AEU's for whatever reason, it cannot simply take them back – it must buy them back. If AEU's are over-allocated, this will cause serious problems. So much is demonstrated by the experience of water trading in Australia over the last decade. Previous governments set the overall "caps" on water allocations in the Murray-Darling Basin too high... To remedy this dire situation, the current Commonwealth Government has had to commit billions of dollars of taxpayer funds to purchase water entitlements... If AEU's are similarly over-allocated under the CPRS, which appears increasingly likely, the resulting failure will cost taxpayers millions of dollars to fix. Even more disturbingly, future attempts to amend the scheme might also amount to an "acquisition of property".¹²

4.19 There is, in other words, at least the possibility that reducing to zero the value of permits would expose the Commonwealth to a compensation claim. Indeed, that possibility was flagged by the Parliamentary Secretary for Climate Change, the Hon. Mark Dreyfus QC MP. The result would be to hinder repeal of this legislation by a future government.

4.20 This is undemocratic in itself and on top of that, economically and socially irresponsible. After all, even supporters of the government's scheme, such as

12 Michael Power, 'Emissions trading in Australia: Markets, law and justice under the CPRS', *Environmental and Planning Law Journal*, (2010) 27, pp 145–146.

Professor Garnaut, admit there are many uncertainties about the future global framework for climate change. It would be irrational for Australia to lock itself into a carbon tax and/or an emissions trading scheme should it emerge that comprehensive, effective, global action is not occurring.

4.21 It is understandable that the government, in implementing a system of tradeable permits, would want to clarify the legal basis for their acquisition and trade. However, as with water entitlements, it could achieve this goal, and thus provide investors with certainty, while making it clear that any modification to the value of the permits, including through their repeal, did not give rise to a basis for compensation. It could and it should, in other words, specify that it retained the right to vary the permits, including by repeal.

4.22 In contrast, the government has ignored the concerns raised by legal experts and their recommendation that clarification be sought as to whether or not just terms compensation pursuant to subsection 51(xxxi) of The Constitution would result from a future the repeal of the legislation.

4.23 The committee is of the view that in failing to clarify this issue the government is merely seeking to undermine the scope for future governments to reverse its policy. In addition, the government's acting in breach of an emphatic pre-election commitment not to introduce a carbon tax. The Gillard Government, irresponsibly, is also intent on preventing future governments from implementing a commitment to rescind the carbon tax and/or an emissions trading system.

Recommendation 5

4.24 In the event that the government proceeds with the carbon tax, the committee recommends that clause 103 of the Clean Energy Bill 2011 be amended to ensure that a property right does not attach to permits and to make it clear that permits can be altered, repealed or revoked at any time without that amounting to an acquisition of property.

Chapter 5

The rise and cost of the green bureaucracy

Introduction

5.1 This chapter of the report outlines the rise of a new green bureaucracy to oversee the administration of the carbon tax and other aspects of the government's Clean Energy Future legislative program.

5.2 This chapter:

- shines a light on the costs to the Commonwealth Budget of the green regulators and agencies;
- highlights the truncated process of consultation regarding the regulators and agencies; and
- puts into sharp focus the growth in the green bureaucracy.

5.3 In the event that the relevant legislation to give effect to the regulators is passed by the parliament, the committee recommends careful scrutiny of the regulators and the potential impact that a specific regulator, the Clean Energy Finance Corporation (CEFC), could have on the Commonwealth Budget.

The regulatory structure

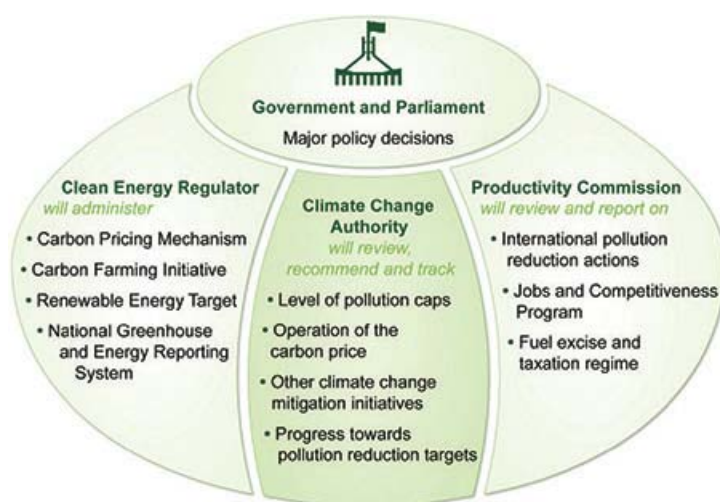
5.4 The governance structure for the scheme is set out in the graphic below. The Australian Government and the Minister for Climate Change and Energy Efficiency are responsible for setting the overall policy direction for climate change.

5.5 The Climate Change Authority (CCA) will recommend pollution caps and oversee the operation of the flexible carbon permit trading market. It will be staffed by around 45 employees, including commissioners.¹ The Clean Energy Regulator (CER) will administer the scheme that enables the trading of permits. It will be resourced by 330 staff.² These agencies are in the process of being established with staff and other resources being marshalled to establish these entities.

5.6 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 CEFC. As a result, significant Commonwealth expenditure will not be subject to periodic, independent scrutiny. The Productivity Commission is already established and the CEFC is yet to be established - there is, as yet, no bill to create that agency.

1 Mr Blair Comley, Secretary of the Department of Climate Change and Energy Efficiency, *Estimates Hansard*, 17 October 2011, p. 3.

2 Mr Blair Comley, Department of Climate Change and Energy Efficiency, *Estimates Hansard*, 17 October 2011, p. 3.

Graphic 5.1: Governance arrangements for the carbon tax³

Issues

5.7 The Energy Supply Association of Australia raised concerns about the scope of the Clean Energy Regulator's information-gathering and monitoring powers, including that they should be contained to circumstances where the CER has a reasonable belief that breach or non-compliance has occurred.⁴ These concerns express similar views to those raised in the press at the time the bills were exposed in draft by the Shadow Environment Minister, the Hon. Greg Hunt MP.⁵

5.8 The Explanatory Memorandum for the Clean Energy Bill 2011 states:

The Regulator has broad powers to gather information to let it monitor compliance with the mechanism, investigate possible contraventions and, where necessary, take enforcement action. These powers reflect the nature of the mechanism, under which liable entities must actively comply with its requirements, as well as avoid contravening the law.⁶

5.9 While the Joint Committee '...is satisfied that the scope of the Clean Energy Regulator's powers is appropriate given its role in promoting compliance with the mechanism and in ensuring its ongoing integrity and security',⁷ this committee wants such regulatory powers subject to scrutiny in the future to ensure their proper administration.

3 The graphic is from the 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). The content is identical to that contained in the Clean Energy Bill 2011, *Explanatory Memorandum*, p. 13.

4 Energy Supply Association of Australia, *Submission 1 to the Joint Select Committee*, p. 3.

5 Greg Hunt MP, 'Real power to go to carbon cops', *Herald Sun*, 22 August 2011 <http://www.greghunt.com.au/Pages/Article.aspx?ID=2156> (accessed 18 October 2011).

6 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 218.

7 Joint Select Committee on Australia's Clean Energy Future Legislation (October 2011), *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, p. 96.

Other agencies

5.10 In addition to the establishment of the regulators referred to above, other agencies will also be getting involved in the implementation of the government's Clean Energy Plan - the CEFC and the Australian Renewable Energy Agency (ARENA).

Clean Energy Finance Corporation

5.11 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 2013-14.⁸ This is amongst the largest single cost item of the Clean Energy Future Plan.

5.12 The CEFC was subject to inquiry during the course of the committee's public hearings. The corporation is a part of the regulatory architecture for the overall carbon tax scheme but despite this its exact status remains unclear with it possibly being part of the Treasury Portfolio or the Finance and Deregulation Portfolio.⁹ It is not yet established.¹⁰

5.13 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 are driving the delay.

5.14 The rationale given by the Gillard Government for a public sector organisation competing with private businesses in the provisions of loans is 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.¹¹

5.15 While the CEFC will be providing a variety of loans, some of which are to be non-commercial, this inevitably gives rise to concerns about the fiscal impact of such organisations on the Commonwealth Budget:

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

9 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.

10 Mr Stein Helgeby, Deputy Secretary, Financial Management Group, Department of Finance and Deregulation, *Estimates Hansard*, 18 October 2011, p. 27.

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

- 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.¹²

5.16 Many of the government's claims about the rationale for the CEFC and about its fiscal impact seem to be mutually contradictory.

5.17 The inevitable concern with 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.

5.18 To the extent that picking winners is unsuccessful, there will be an impact on the Commonwealth Budget. The extent of that impact is a 'thorny issue'. At present:

There are some issues that we [the Department of Finance and Deregulation] are working through which go to transparency and accountability which are really around how to classify the entity and how to classify the transactions – essentially how to account for what it does. We are working through that with the ABS [Australian Bureau of Statistics], with ANAO [Australian National Audit Office], with Treasury and within Finance to understand the entity and understand the kinds of activities it will undertake.¹³

5.19 The Department of Finance and Deregulation explained the matter further:

Whilst the Clean Energy Finance Corporation is in the general government sector, the key issue is the activities that it undertakes are the essential thing in determining whether those activities hit the budget bottom line or not. If you look at the Clean Energy Future program, you will note that we allocated the costs from the Clean Energy Finance Corporation to the budget bottom line. The corporation is being set up to provide loans to commercial operations. In the vast majority of cases we anticipate that will be so, so the impact on the budget bottom line does not occur. We have, however, said that in some proportion of those activities of the corporation there may be an impact on the bottom line of the budget, and we have taken

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

13 Mr Stein Helgeby, Deputy Secretary, Department of Finance and Deregulation, *Estimates Hansard*, 18 October 2011, p. 27.

that into account in the numbers that were incorporated in the release that was put out on the Clean Energy Future package.¹⁴

5.20 The test for the impact on the Commonwealth Budget is as follows:

If an entity in the general government sector is undertaking investments to achieve a return, then they do not impact on the budget bottom line, according to the accounting standards.

To the extent to which the Clean Energy Finance Corporation is undertaking investments, and that is the government's policy, then the majority of its activities will not impact on the budget bottom line. However, as announced in the policy, there are effectively two streams of its investments: one is for renewable energy and the other is for clean energy. On the renewable energy side, which is an emerging set of technologies, we have made an allowance of 15 per cent of those investments being deemed ultimately as grants, which would impact on the budget bottom line.

Effectively, 50 per cent of the activities of the entity will be in renewable energy investments, of which 15 per cent are assumed as grants because it is an emerging technology, and there may be some investments that do not achieve a particular return.¹⁵

5.21 In these circumstances the total cost of the CEFC program is \$10 billion over five years, with \$2 billion being spent annually. Of that, \$1 billion per year is for activities related to renewable energy and it is this part of the expenditure that is likely to be non-commercial and hit the Commonwealth Budget. The value of that impact is, according to the Department of Finance and Deregulation, 15 per cent of that \$1 billion. That is a \$150 million per year hit to the Budget under the CEFC.

Australian Renewable Energy Agency

5.22 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. Future funding for ARENA will also come from dividends paid by the CEFC.¹⁶

5.23 ARENA is located within the portfolio of the Department of Resources, Energy and Tourism.

14 Mr David Tune, Secretary of the Department of Finance and Deregulation, *Estimates Hansard*, 18 October 2011, p. 73.

15 Mr David Martine, Deputy Secretary, Budget Group, Department of Finance and Deregulation, *Estimates Hansard*, 18 October 2011, pp 72 – 73.

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

5.24 In the context of ARENA, on 13 October 2011, the Senate referred the provisions of the Australian Renewable Energy Agency (Consequential Amendments and Transitional Provisions) Bill 2011 and the Australian Renewable Energy Agency Bill 2011 to the Senate Environment and Communications Committee for inquiry and report. Submissions were to be received by 20 October 2011. The reporting date is 7 November 2011.

5.25 Given the important role of ARENA, that is, its oversight of \$3.2 billion, it is surprising that such a tight reporting timeline was applied to the process of scrutinising the Bills.

5.26 The ARENA Bills were not part of the government's Clean Energy Future Legislative Program that was introduced into the Parliament on 13 September 2011.¹⁷

Other regulators

5.27 In addition to the climate change regulators and other agencies outlined above, several other regulators will also be involved in the new regime and these are outlined below.

Australian Competition and Consumer Commission

5.28 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.

5.29 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.¹⁸

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

Finance sector and criminal justice regulators

5.31 Under the government's Clean Energy Future Legislative Package, the Australian Securities and Investments Commission (ASIC) will also have a role in the emissions trading scheme. As emissions units will be permits and will be defined as financial products, ASIC will have responsibility for the regulation of related carbon

17 Source: <http://www.aph.gov.au/house/committee/jspacefl/bills.htm> (accessed 18 October 2011).

18 Joint Press Conference with 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).

permit trading markets.¹⁹ At this time, there are no publicly available costings for ASIC which will undertake this important role.

5.32 The Clean Energy Regulator will also have powers to work with the Australian Transaction Reports and Analysis Centre, the Australian Federal Police and the Commonwealth Director of Public Prosecutions regarding fraud and criminal activity that could be involved with the permits. As highlighted in chapter 3, there is considerable risk around of fraud around permits and this highlights the need for well resourced regulators to act to ensure the integrity of the permits.

5.33 The Clean Energy Regulator will also have powers to work with the Australian Transaction Reports and Analysis Centre, the Australian Federal Police and the Commonwealth Director of Public Prosecutions regarding fraud and criminal activity that could be involved with the permits²⁰.

19 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 38.

20 Clean Energy Bill 2011, *Explanatory Memorandum*, p.38

The cost of the regulators

5.34 The table below provides an overview of the costs of the green regulators and agencies:

Table 5.1: The cost of green regulators and agencies

	Clean Energy Regulator (\$m) ²¹	Climate Change Authority (\$m) ²²	Productivity Commission Reviews (\$m) ²³	Clean Energy Finance Corporation (\$m) ²⁴	Australian Renewable Energy Agency (\$m)	Australian Competition and Consumer Commission (\$m) ²⁵	Australian Securities and Investment Commission (\$m)
2011-12	-68	0	-4	-60	Yet to be disclosed.	-12.8	Yet to be disclosed.
2012-13	-68	-6	-4		Yet to be disclosed.		Yet to be disclosed.
2013-14	-61	-9	-5		Yet to be disclosed.		Yet to be disclosed.
2014-15	-59	-9	-5		Yet to be disclosed.		Yet to be disclosed.
Totals	-256	-25	-18	-60	Yet to be disclosed.	-12.8	Yet to be disclosed.

A deficient consultation process

5.35 The Clean Energy Plan legislative package comprises 19 bills constituting more than 1 100 pages of new legislation. Yet even these 19 bills are already known not to constitute the entire legislative package proposed by the government. The ARENA Bills were introduced into the parliament separately and the CEFC Bill has not yet been introduced.

5.36 Many stakeholders have expressed concern and dismay at the timelines provided to participate in the Joint Committee on Australia's Clean Energy Future and make a meaningful contribution:

AMEC also expresses its complete dissatisfaction in the manner in which this step-change legislation has been introduced. The timelines throughout

21 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 41.

22 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 41.

23 Clean Energy Bill 2011, *Explanatory Memorandum*, p. 41.

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

25 Joint Press Conference with 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).

the legislative consultation process have been extremely short, which has not allowed AMEC and its members any reasonable time to properly consider the finer detail of the legislation.²⁶

BFVG is also disappointed in the amount of time granted (six days including a weekend) by Government to provide submissions in regards to the proposed suite of legislation (approximately 1100 pages) under the banner of Carbon Tax. BFVG would have thought that such an important suite of legislation deserved a longer time to enable both industries affected and the general community to provide in-depth submissions and encourage worthwhile debate.²⁷

5.37 As mentioned earlier, the Clean Energy Future legislative plan is not the entire suite of legislation that will give effect to the government's plan. ARENA and the CEFC were not part of the suite of 19 Bills introduced into the Parliament on 13 September 2011. The concern about the process also extended to groups supportive of the government's reform program. Below is an excerpt from a media release from the group Climate Action Newtown – 100% Renewable Campaign:

The 100% Renewable Energy campaign has today welcomed the introduction of the carbon price bills in parliament, but questioned the reasons for the delay on the Clean Energy Finance Corporation and Australian Renewable Energy Agency bills.

“The bills that deliver more renewable energy for Australia are the real clean energy bills. If the government is hoping to win community support for the carbon tax these are the bills that need to be front and centre in parliament,” said Lindsay Soutar, 100% Renewable Campaign Co-ordinator.

The parliamentary timetable announced by the government yesterday did not include the renewable energy bills to institute the Clean Energy Finance Corporation and Australian Renewable Energy Agency. It is unclear when these bills will be introduced into the parliament.

“While we welcome the introduction of the carbon price bills, we think the government’s decision to delay the bills for the two new renewable energy agencies is the wrong one.

...

"Renewable energy is something we know the Australian people support – it’s the most popular part of the package - so why delay it?"²⁸

26 Association of Mining and Exploration Companies, *Submission 8 to the Joint Select Committee*, p. 3.

27 Bundaberg Fruit & Vegetable Growers, *Submission 10 to the Joint Select Committee*, p. 3.

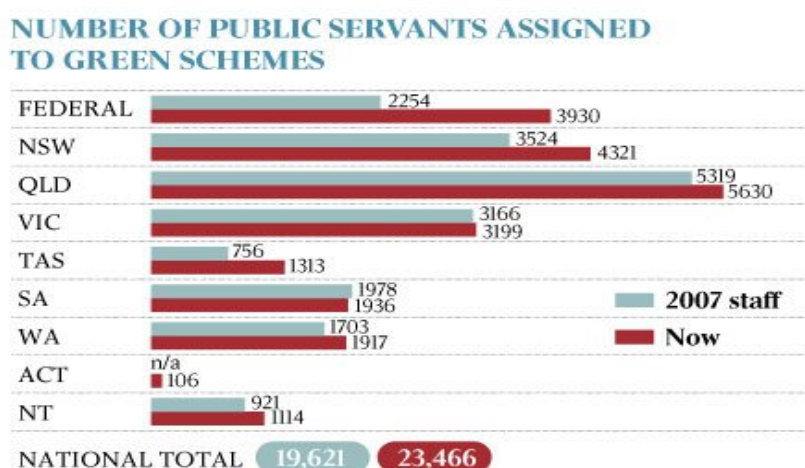
28 Source: <http://100percent.org.au/blogs/media-release-pass-real-clean-energy-bills-now-says-100-renewable-energy> (accessed 18 October 2011).

Rise of the green machine

5.38 Since coming to office in 2007, the Rudd and Gillard Government's have overseen a rapid and sharp rise in the number of officials engaged in policy advising and regulating matters pertaining to the environment.

5.39 The table below provides a national snapshot of the rise of the 'green machine'. As the table below highlights, the number of green bureaucrats has risen from 19 621 in 2007 to 23 466 in 2011. That is around 1 000 new staff per year since 2007.

Graphic 5.2: Number of public servants assigned to green schemes, across Australia²⁹



5.40 The federal green workforce has risen by more than 75 per cent since 2007.³⁰ It has risen from 2 254 in 2007 to 3 930 in 2011. This growth in the green workforce equates to a workforce of around 4 000 permanent staff. To this 4 000 staff, there is a need to add another 345 for the CER and the CCA. Further growth can be expected once ARENA and the CEFC are more developed.

5.41 According to the Chief Executive of the Australian Industry Group, Ms Heather Ridout, '[t]he growing green bureaucracy is a concern for our members'.³¹

29 Natasha Bitá, 'Green public sector on the rise', *The Australian*, <http://www.theaustralian.com.au/national-affairs/green-public-sector-on-the-rise/story-fn59niix-1226095589075> (accessed 18 October 2011).

30 Natasha Bitá, 'Green public sector on the rise', *The Australian*, <http://www.theaustralian.com.au/national-affairs/green-public-sector-on-the-rise/story-fn59niix-1226095589075> (accessed 18 October 2011).

31 Natasha Bitá, 'Green public sector on the rise', *The Australian*, <http://www.theaustralian.com.au/national-affairs/green-public-sector-on-the-rise/story-fn59niix-1226095589075> (accessed 18 October 2011).

Committee comment

5.42 The committee notes the ever-expanding green bureaucracy and the potential fiscal risk posed by an agency such as the CEFC. In addition, the regulators will acquire powers to undertake their tasks and while they will most likely attempt to act judicially, the committee recommends that the Senate review the conduct of the green regulators – the Climate Change Authority and the Clean Energy Regulator.

Recommendation 6

If the Clean Energy Future legislative package is passed by the Parliament, the committee recommends that the Senate review the conduct of the relevant regulators.

Recommendation 7

If the Clean Energy Future legislative package is passed by the Parliament, the committee recommends that the Senate review the cost to the Budget of the Clean Energy Finance Corporation and the Australian Renewable Energy Agency given that between them they will be responsible for \$13 billion of expenditure.

Chapter 6

Community understanding of the carbon tax reforms

Introduction

6.1 This chapter addresses the community's understanding of the carbon tax.

6.2 It details the speed with which the government has introduced the policy and the money it has spent on advertising and public education campaigns. It also examines the concern about this raised by the Joint Select Committee on Australia's Clean Energy Future legislation (the Joint Committee), which attributes the community's lack of awareness of the details of the tax to the media's coverage of the debate.

Undue haste

6.3 As detailed extensively in the Interim Report of this committee, *The Carbon Tax: Economic pain for no environmental gain* (the Interim Report), the process surrounding the development of the government's carbon tax package was characterised by a lack of detail, transparency and unnecessary haste.

6.4 Following a commitment to the Australian people prior to the 2010 federal election that there would be no carbon tax, as part of its deal with the independents to form government, the Gillard Government announced the establishment of the Multi-Party Climate Change Committee (MPCCC) to explore how Australia would introduce a carbon tax.¹ Less than six months later, on 24 February 2011, the MPCCC released its report and the government announced that it would move to introduce a carbon tax to commence on 1 July 2012.²

6.5 At the time of announcing that the proposed carbon tax would be introduced effective from 1 July 2012, the government did not provide any of the detail of the tax to the public. It was not until 10 July 2011 that the key features of the proposed tax were announced. This was followed by the release of some of the draft legislation outlining the scheme for public consultation on 28 July 2011, less than 12 months before its proposed commencement. The public was then given just over three weeks to provide comment on the 19 bills comprising the Clean Energy Future legislative package. The legislation to establish the Australian Renewable Energy Agency

1 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, 'Prime Minister establishes climate change committee', Joint Media Release, 27 September 2010, p. 1.

2 Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, pp 31–36.

(ARENA) was not a part of this package – that legislation, the two ARENA Bills, were only introduced into the House of Representatives on 12 October 2011.³ The provisions of the two bills have been referred to the Senate Environment and Communications Legislation Committee for inquiry and report by 7 November 2011.⁴ The committee notes that the legislation to establish the Clean Energy Finance Corporation, which will invest \$10 billion in businesses that are seeking funds to 'get innovative clean energy proposals and technologies off the ground'⁵ and will invest in the transformation of existing manufacturing businesses, has not yet been introduced into parliament. Nor has an exposure draft of the bill been released for public comment.

6.6 The Clean Energy Future legislative package was introduced into the House of Representatives on 13 September 2011. The 19 bills were then referred for inquiry following the establishment of the Joint Committee.⁶

6.7 In its report to the Parliament, the government, through the Joint Committee, claims that the lack of awareness within the community is due to the media's coverage of the matter:

Given the highly contested nature of the policy debate, this is, to some extent, understandable, as many Australians have only heard about the general policy issue, as set out in news media reports and advertisements which have tended to focus on specific elements of the bills, but not the totality of issues. While this is not unusual in the development and implementation of public policy, it is also a matter of concern, given the intended commencement of the mechanism on 1 July 2012.⁷

6.8 Such a claim, however, does not acknowledge that just 422 days separated the government's assertion that there would be no carbon tax, and the passage of the Gillard Government's Clean Energy Future legislative package through the House of Representatives.

3 The Hon. Martin Ferguson MP, Minister for Resources and Energy, Minister for Tourism, The Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Legislation Introduced to Establish ARENA', Joint Media Release, 12 October 2011, <http://minister.ret.gov.au/MediaCentre/MediaReleases/Pages/LegislationIntroducedtoEstablishARENA.aspx>, (accessed 19 October 2011).

4 http://www.aph.gov.au/Senate/committee/ec_ctte/arena/info.htm, (accessed 19 October 2011).

5 <http://minister.ret.gov.au/MediaCentre/MediaReleases/Pages/InnovationandRenewableEnergy.aspx>, (accessed 19 October 2011).

6 The Joint Select Committee was established on 14 September 2011 in the House of Representatives, the decision to establish the committee was ratified by the Senate on 15 September 2011.

7 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, pp 58–59.

6.9 It is also noted that in its report the Joint Committee set out (at Appendix D) the specific changes to the legislation that were made following the consultation on the exposure draft. In respect of the more broader concerns raised by submitters to their inquiry however, the Joint Committee stated:

The committee acknowledges that some businesses have concerns about the policies implemented by the legislation. However, these issues reflect a disagreement with the underlying policy, which was announced on 10 July 2011, rather than the drafting of the bills, and are therefore beyond the scope of the committee's consideration.⁸

6.10 The Joint Committee's report noted that the Commonwealth Parliament, since 1992, had completed 35 committee inquiries into how to respond to climate change (excluding the Joint Committee's inquiry into the clean energy future legislative package).⁹ However, after all of those parliamentary inquiries and related debates informing community attitudes over many years, it is important to note that community opinion is strongly against the introduction of a carbon tax or an emissions trading scheme in Australia. The community understands that a price on carbon in Australia outside an appropriately comprehensive global agreement to price emissions will be all economic pain for Australia for no global environmental gain. Moreover, the Australian community was entitled to expect that the Prime Minister had reached the same conclusion as they had given her emphatic pre-election promise that there would be no carbon tax under the government she leads. After all, many of those inquiries, in particular those during the 42nd Parliament, had identified the many flaws of a carbon tax or an emissions trading scheme as proposed by the government in the absence of an appropriately comprehensive global agreement to price emissions.

Committee comment

6.11 The committee takes the view that the legislative design process that occurs following the policy development stage should not be rushed. How a policy is translated into legislation requires much consideration and discussion and during that process consideration should be given to concerns raised with the underlying policy rationale. This cannot occur when the public and key stakeholders are not given adequate time to consider the detail of the legislation that is proposed to implement the government's scheme.

Government advertising and promotion

6.12 Similarly, the government's claims that the lack of community understanding of the Clean Energy legislative package is due to the media's coverage of the issue

8 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, p. 68.

9 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, pp 6–10.

does not recognise the government's extensive efforts to advise the community of the changes through the millions of dollars spent advertising the carbon tax initiative.

6.13 On 10 February 2011, the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet AM MP, announced the establishment of the Climate Change Commission. According to the Minister, the purpose of the Commission is to 'provide expert advice and information to the Australian community on climate change'.¹⁰

6.14 The Climate Commission is lead by Professor Tim Flannery.¹¹ Its establishment was an election commitment announced in July 2010. The Government has set funding at \$6.5 million (over four years).¹²

6.15 In addition to referring to grants which appear to have been paid to environmental groups supportive of the government's policy, *The Australian* recently reported that a special 'propaganda' unit was established on 4 July 2011, before the government even announced the details of its carbon tax plan, to sell the tax.¹³

The ten-person carbon price implementation team was quietly formed on July 4 – five days before details of the carbon pricing scheme were revealed.

It came to light this week in a one-line entry in documents presented to a Senate committee. The document, revealed by *The Australian Online* yesterday, said five staff had been appointed to the team, which is based in an office next to that of Climate Change Minister Greg Combet.

Further documents reveal another five staffers have been assigned to the unit from the offices of the Prime Minister, the Treasurer and other senior ministers.

The unit, headed by a senior staffer from Julia Gillard's office, will cost taxpayers more than \$1 million a year.

Its senior adviser-level head earns up to \$170,000 a year, while the nine adviser-level staffers draw salaries of up to \$115,000.

The Prime Minister defended the establishment of the unit yesterday, saying it would better inform the public of the details of her carbon tax.

10 Media Release, the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Launch of the Climate Commission', 10 February 2011.

11 Media Release, the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Launch of the Climate Commission', 10 February 2011.

12 Media Release, the Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Launch of the Climate Commission', 10 February 2011.

13 James Massola, Secret spin cell dwarfs Howard's GST transition sell', *The Australian*, 20 October 2011, <http://www.theaustralian.com.au/national-affairs/carbon-plan/secret-spin-cell-dwarfs-howards-gst-transition-sell/story-fn99tjf2-1226171159201>, (accessed 20 October 2011).

"We've been bringing information to people about carbon pricing and we will continue to do so," she said.

...

A spokesman for Mr Combet said: "The carbon policy implementation team was established to provide information in support of the implementation of the carbon price."¹⁴

6.16 On 16 July 2011, Minister Combet, released a media statement detailing that a national advertising campaign to educate the community about the Clean Energy Future package would commence on Sunday, 17 July 2011.¹⁵ In that statement, the Minister detailed that the government had committed \$12 million to the campaign, which would provide information on what the government's plan would mean for households, businesses and communities.¹⁶ The public awareness campaign included the creation of a specific purpose website: www.cleanenergyfuture.gov.au, a direct mail out campaign to Australian households (*What a carbon price means for you: The pathway to a clean energy future* – a 19 page document promoting the government's policy) and provided information via the websites of both the Climate Change Commission and the Department of Climate Change and Energy Efficiency.

6.17 In addition to these advertising and public education initiatives, information has also recently been made public that suggests environmental groups supportive of the government's carbon tax and clean energy future policy were provided with funding to run community campaigns supporting it:

Details of the grants were revealed during Senate estimates today and the opposition immediately seized on them, claiming the groups were being rewarded for their political support of the government and its carbon scheme.

Grants to the Australian Conservation Foundation, the Climate Institute and the Australian Youth Climate Coalition...were approved by Climate Change Minister Greg Combet only weeks before the government announced details of its climate change package in July.¹⁷

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- 14 James Massola, 'Secret spin cell dwarfs Howard's GST transition sell', *The Australian*, 20 October 2011, <http://www.theaustralian.com.au/national-affairs/carbon-plan/secret-spin-cell-dwarfs-howards-gst-transition-sell/story-fn99tjf2-1226171159201>, (accessed 20 October 2011).
- 15 Media Statement, The Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Clean energy future public information campaign', 16 July 2011, p. 1.
- 16 Media Statement, The Hon. Greg Combet AM MP, Minister for Climate Change and Energy Efficiency, 'Clean energy future public information campaign', 16 July 2011, p. 1.
- 17 Marcus Priest, 'Mud-slinging over climate group grants', *Australian Financial Review*, 18 October 2011, p. 10.

6.18 At a Senate Estimates hearing on 17 October 2011, the Department of Climate Change and Energy Efficiency provided further information concerning some of the grants that have been paid:

Table 6.1: Details of grants paid by the government to organisations supportive of the government clean energy future policy¹⁸

Organisation	Amount of grant	Activities to be funded
Australian conservation foundation (ACF)	\$398 000	Public education campaign involving a series of 2000 workshops around Australia.
Australian Youth Climate Coalition (AYCC)	\$271 000	Two AYCC Power Shift Summits held in Perth and Brisbane.
Shmeco.com	\$15 000	Sustainable House Day 2011
Carbon Expo 2011	\$55 000	Sustainable House Day 2011
Climate Institute	\$250 000	To work with the Australian Council of Social Service and Choice to compare carbon price impacts for consumers compared to other government reforms.
CSIRO	\$500 000	Public engagement including \$100 000 for a summer study on energy efficiency and carbon mitigation.
Climate Works Australia	\$460 000	Grant not yet finalised – still being negotiated. To raise community awareness of how to reduce carbon emissions in the most cost-effective way possible, using regional or local low-carbon growth plans as a guide.

Committee comment

6.19 The committee takes the view that the government's lack of transparency around the extent of its education and implementation expenditure for this policy initiative demonstrates the lack of respect it has for the community.

6.20 Further, given that it has since been revealed that the government spent \$24 million on advertising the clean energy future package,¹⁹ the committee takes the view that any failure on the part of the community to understand the detail of the proposed tax cannot be attributed to the media but rather an ineffective media and direct public education campaign by the government. The committee considers that as this is the

18 Ms Harinder Sidhu, First Assistant Secretary, Adaptation, Science and Communications Division, Environment and Communications Legislation Committee, *Draft Estimates Hansard*, 17 October 2011, pp 27–31.

19 David Wroe, 'Labor accused of giving grants to groups backing carbon tax', *Sydney Morning Herald*, 18 October 2011, p. 4.

case, the government should answer for the further waste and mismanagement that has occurred throughout this hurried process.

6.21 The committee also suggests that by paying grants to environmental groups supportive of the government's policy, the government was able to side step the requirements of the *Guidelines on Information and Advertising Campaigns by Australian Government Departments and Agencies*.²⁰ The committee considers that this is inappropriate and calls the government to account for these inappropriate actions.

6.22 The committee takes the view that all of the evidence supports its view that any lack of community understanding that surrounds the government's Clean Energy Future package is the result of the rushed legislative development process, the hasty introduction of the legislation into parliament and an ineffective advertising campaign. Most importantly, the Australian public understand a bad tax when one is put in front of it.

Recommendation 8

6.23 The committee calls upon the government to carefully consider further expenditure on its so-called community education for the carbon tax and suspend further unnecessary advertising if the government's legislation passes the Parliament.

**Senator Mathias Cormann
Chair**

20 See <http://www.finance.gov.au/advertising/docs/Guidelines-on-Information-and-Advertising-Campaigns-by-Australian-Government-Departments-and-Agencies-March-2010.pdf>, (accessed 26 October 2011).

Government Senators' Dissenting Report

Inquiry into a carbon pricing mechanism

Introduction

1.1 Government Senators believe the Coalition's final report of the Senate Select Committee on the Scrutiny of New Taxes continues the Coalition's groundless campaign of disinformation and fear about carbon pricing and demonstrates their continued emphasis on short-term political advantage at the expense of serious long-term economic reform. No new evidence or information has been presented to the committee since the tabling of the committee's interim report¹ that alters our view that climate change is real and that delaying action on climate change will impose significant increased costs to Australia up to 30 per cent higher than taking action now.

1.2 This should not come as news to the Coalition. The report of the Prime Minister's Task Force on Emissions Trading, chaired by Peter Shergold and commissioned by Prime Minister Howard in 2007 made it clear that the costs of delaying action to reduce greenhouse emissions would far outweigh any short term benefit of not acting.

"After careful consideration, the Task Group has concluded that Australia should not wait until a genuinely global agreement has been negotiated. It believes that there are benefits, which outweigh the costs, in early adoption by Australia of an appropriate emissions constraint. Such action would enhance investment certainty and provide a long-term platform for responding to carbon constraints. Combined with Australia's existing domestic and international work on technology development and cooperation, including the Asia-Pacific Partnership for Clean Development and Climate, it would position us to contribute further to the development of a truly comprehensive international framework."²

1.3 Following the release of the Shergold Report, as it was to become known as, the Howard government promised to introduce an emissions trading scheme if it was re-elected at the 2007 election.

1.4 Mr. Howard would later describe his decision thus:

"We had bitten the bullet on emissions trading, with the Shergold report released on 1 June rapidly being turned into clear policy. This was the agenda of an active

1 The interim carbon tax report of the Senate Select Committee on the Scrutiny of New Taxes was tabled on 7 October 2011.

2 *Report of the Task Group on Emissions Trading*; 1st June 2007, p.6:
<http://pandora.nla.gov.au/pan/72614/20070601-0000/www.pmc.gov.au/publications/emissions/index.html#viewing> – Viewed 27th October 2011

government, still policy-confident and by no means spent and exhausted after 11 years of power."³

1.5 Government senators are prepared to take Mr. Howard's words on his 2007 decision to implement an emissions trading scheme at face value. We have no reason to believe he would not have done so had he won the 2007 election. What is extraordinary is that the Coalition now exhibits all of the characteristics that are the reverse of what Mr. Howard's claimed his government was in 2007 – fiscally lazy, inactive, relentlessly negative, policy-weak, spent and exhausted on policy development.

1.6 As one astute commentator began a column recently:

"Oh for goodness sake. Enough. Pledges in blood. Policy run on the smell of intestinal fortitude alone. We are supposed to be talking about who becomes Prime Minister here, not an action man movie."⁴

1.7 In the two years since the Senate considered the Carbon Pollution Reduction Scheme bills, there has been nothing placed before this committee, the Parliament or anywhere in the public domain that in our view would disturb the 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. Government senators are of the opinion that it is this evidence on which governments must base their policy responses to climate change.⁵ To do nothing, when the science is clear and the evidence identifies enormous costs to the community of delaying action, is an irresponsible derogation of duty to future generations.

1.8 The Coalition's "Direct Action" policy is an outlier; it is uniquely out of step with view of no less than six successive parliaments. There exists in the parliamentary record an overwhelming parliamentary consensus that action on climate change needs to be taken and that the best mechanism for that action is a market based price signal in the economy. Since 1992, the Parliament has conducted 35 committee inquiries (excluding the recent Joint Select Committee on Australia's Clean Energy Future Legislation) into climate change related issues. The overwhelming view is that action is essential. These inquiries and a snapshot of their recommendations are listed in Appendix 1.

1.9 In this report we consider:

³ Howard, J. W., *Lazarus Rising; A personal and political autobiography*; Harper Collins, Pymble, 2010, p.635

⁴ Tingle, Laura, *Labor Hopeless, Abbott a hollow man*; Australian Financial Review, 28th October 2011, p.59.

⁵ Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 251.

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- the Coalition's criticisms of the Treasury modelling of the Clean Energy Future policy;
 - the environmental and economic sleights of hand contained in the Coalition's direct action policy; and
 - the effect on business and investment certainty of further delay to a carbon price mechanism; or in the alternative, a future repeal of any carbon price mechanism.

1.10 Government senators are of the view that the weight of evidence in the public arena and provided to this committee supports Treasury's modelling on the proposed carbon price mechanism. That same evidence points to the fact that the Coalition's direct action plan would not enable Australia to meet its greenhouse reduction targets without a massive blowout in costs. It further indicates that delaying action on climate change, including fuelling speculation that a future government would repeal any carbon pricing legislation, is causing business and investment uncertainty that has the potential to cause significant disruption in investment markets worth tens of billions of dollars.

Modelling

1.11 Throughout this inquiry, the Coalition has asserted that the Treasury modelling is not robust and the modelling process has not been transparent. Government senators refute these claims and point to evidence in the public arena, and given to this committee, which clearly demonstrates that the Treasury modelling is detailed, robust and has withstood intense scrutiny by this committee and independent economic analysis. The Coalition's attack on the Treasury modelling is a red herring.

1.12 As detailed in the documents accompanying the government's Clean Energy Future Package, as well as in information that has been made publicly available since the announcement of a carbon price, 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.⁶ That modelling in fact shows that the Australian economy will continue to grow, incomes will continue to grow and the carbon price mechanism will decouple growth from greenhouse gas pollution and achieve the parliamentary target of reducing emissions to 5 per cent below 2000 levels by 2020, and 80 per cent below 2000 levels by 2050.

1.13 As noted in the our interim report, although 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

6 Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 261.

a mere seven months.⁷ Gross National Income (GNI) per person will continue to grow, as will Gross Domestic Product (GDP), total employment and real wages. Indeed, every sector in the Australian economy will continue to grow up to 2020 and beyond.⁸

1.14 The Coalition seeks to cast doubt over the veracity of the Treasury modelling suggesting that the government has sought to prevent public access to the modelling and therefore avoid scrutiny. This is not the case. In fact, Treasury evidence to this committee has consistently and emphatically explained that a huge amount of detail about the modelling is in the public domain and that the results of the modelling have been released in a comprehensive and transparent way, including the assumptions made about the macro-economy.

1.15 Some commentators have been extremely critical of the government's modelling. However the assertions of these same commentators do not themselves stand up to scrutiny. By way of example, we have set out the evidence of Ms. Meghan Quinn of Treasury's Macroeconomic Modelling Division at length in our interim report. However, it is worth setting out the nub of her response to criticisms of the modelling once more:

"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' articles relating to publicly available information."⁹

1.16 Treasury has explained that the models they have used are available publicly; anyone is free to use those models (as Frontier Economics has done) make their own assumptions drawing on the information available, and come up with different results. Treasury is using the same publicly available information yet applying their expertise to analyse the expected impact of a carbon price on the Australian economy.¹⁰

7 Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 261.

8 Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, pp 261–262.

9 Ms. Meghan Quinn, Department of the Treasury, quoted in Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, pp 263–264.

10 Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 264.

1.17 As Ms. Quinn explained:

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.¹¹

1.18 Government senators note that this approach is the same approach that Treasury has taken with previous governments of all political persuasions, including the modelling of the GST, and will therefore take with future governments regardless of their political persuasion.

1.19 Government senators are satisfied that none of the political or economic attacks on Treasury's modelling have in any way cast doubt on its results. Furthermore, no additional information has been released since the interim report of this committee that would suggest the modelling contains errors. Government senators are therefore satisfied that the modelling exercise has been sound, 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.

1.20 That modelling estimates the carbon price will contribute to a nine per cent increase in household electricity prices in NSW over the period 2013–17.¹² However, any increase in household expenditure as a result of the carbon price mechanism will be offset by the government's ongoing household assistance package which is 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.

1.21 We set out the estimated price impact of the carbon price mechanism on everyday household purchases in Table 2 at the end of this report.

1.22 Not only does the Treasury modelling indicate that the price impact for households will be modest, and will be offset by the household assistance package, it also finds that industry and jobs will grow:

11 Ms. Meghan Quinn, Department of the Treasury, quoted in Senate Select Committee on the Scrutiny of New Taxes, *Interim Report – The Carbon Tax: Economic pain for no environmental gain*, October 2011, p. 265.

12 This analysis is based on three different approaches - two specialist electricity sector consultants and an Australian Treasury model - all of which give consistent results.

Senator CAMERON: ... The Leader of the Opposition claims that a carbon tax was a dumb way to go about reducing emissions and that it could see the death of the manufacturing industry in Australia. Have you had any advice from any department anywhere in government that argues that a moderate carbon price will mean the death of the manufacturing industry?

Senator Carr: No, Senator. What we have had is the view that under carbon measures that will be in fact continuing growth for manufacturing, that manufacturing output is expected to grow by five per cent to 2020 and 69 per cent by 2050 from its 2010 base. That is the modelling that Treasury have presented. The point is that all the advice coming to government is that, while it is tough for of manufacturing at the moment, particularly given the changes occurring in our economy, the global volatility, the exchange rate, the questions related to managing the resources boom, and we have got now terms of trade that have risen very sharply and are 65 per cent above the average level for the last century, it does not mean that we ought to be pessimistic about the future of manufacturing. In fact, we ought to be optimistic about the future of manufacturing if we can get the right policy settings. As I say, there are \$20 billion worth of assistance there that people ought be able to tap into if they are creative about it. We certainly want to work with individual firms about how we can maximise opportunities. The key feature is that we will have to be more creative and we have to be more innovative. That is why we are arguing that science and research is so important in building the technologies and building the new industrial processes that allow us to be more competitive into the future.

What I do know is that the proposal to get rid of the innovation councils which has been articulated by some in this parliament is not likely to help industry develop innovative capacity. The 50 per cent reduction in Enterprise Connect's budget which is being proposed by some in this parliament is not likely to help develop industry capabilities for small and medium-size enterprises. The \$500 million taken out of the automotive program is not likely to assist blue-collar workers adapt to these changes that are occurring. Only this week there have been further claims that the Clean Energy Finance Corporation will be withdrawn. These are not measures that are likely to develop the capabilities this country desperately needs to ensure that we can cope with the challenges of the 21st century. This is not just a question about a carbon price, it is not just about the climate change legislation itself; it is about the ability to change the way in which we do business. I think we ought to be optimistic about the future and if we have a real crack at this, working with industry closely, I am absolutely confident that this country has got a huge future in manufacturing.¹³

Mr Hoffman: ... it is not an automatic assumption that the carbon tax is a disaster for tourism forecasts, particularly if you look not just at the carbon tax but at the overall clean energy future package that the government has put forward...

13 The Hon. Kim Carr MP, Minister for Innovation and Industry, Senate Economics Legislation Committee, Estimates Hansard, 19 October 2011, pp 55–56.

Ms Madden: ...I sit on the Tourism Forecasting Committee and I want to support what Martin Hoffman has said, that the impact of the carbon tax is not known. It is part of a broader package. Treasury modelling to date suggests that the impact, if anything, on consumption and discretionary expenditure may be limited...¹⁴

1.23 In fact, government senators find it perplexing that the Coalition continually ignores evidence that demonstrates that delaying action on climate change will actually cost more than taking action now:

Senator THISTLETHWAITE: Has Treasury done any analysis of the costs of delaying introducing a carbon scheme? We hear this commentary all the time that the longer the country delays pricing carbon, the greater the cost will be not only for the nation but for businesses and individuals. Have you done any analysis of delay and what the potential cost could be?

Ms Quinn: Yes, we have done that previously in the analysis in 2008 and also in the latest analysis.... The delay in global action will increase climate change risks, lock in more emissions intensive investment, defer new investments in low emission technologies and increase the cost of achieving any given environmental outcome. The analysis that we did suggests that a delay in global action by three years adds around 20 per cent to the first year of global mitigation costs and delaying entry by a further three years adds a further 30 per cent to the first year of mitigation costs. This suggests that, as you delay, the costs only get greater through time...¹⁵

Direct Action

"It is what it is. It is a policy where, yes, the Government does pick winners, there's no doubt about that, where the Government does spend taxpayers' money to pay for investments to offset the emissions by industry.

"That's the - and the virtue of that - I think there are two virtues of that from the point of view of Mr Abbott and Mr Hunt.

"One is that it can be easily terminated."¹⁶

1.24 While both the government and the opposition share a common target to reduce greenhouse gas emissions by five per cent on 2000 levels by 2020; that is where any policy similarity ends.

14 Mr Martin Hoffman, Acting Secretary, Department of Resources, Energy and Tourism, Ms Jane Madden, Head of Division, Tourism Division, Department of Resources, Energy and Tourism, Senate Economics Legislation Committee; Estimates Hansard, 19 October 2011, pp 95–96.

15 Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division, Macroeconomic Group, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 27.

16 Hon. Malcolm Turnbull MP; *Lateline, ABC Television, 18th May 2011*

- Direct action is a political sleight of hand – it is a policy designed to be dumped;
- If it were ever to implemented, direct action will not reduce emissions by anywhere near the Coalitions stated target;
- It would undermine business and investment certainty
- It relies on government subsidies to polluters so that taxpayers carry the burden of abatement;
- It will involve tax expenditures of \$1300 per household with no compensation;
- It is reliant on soil carbon abatement for over half of its target at a price paid to farmers less than a quarter of the price necessary for abatement to be economically viable.

1.25 The central abatement mechanism of the Coalition's direct action plan to reduce greenhouse gas emissions is storing carbon in soil.¹⁷ What the Coalition proposes however, is not a market based mechanism but an 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.

1.26 Yet while the Coalition has made a commitment to reduce carbon emissions by five per cent by 2020 through implementation of their direct action plan, examination of that plan by both the Department of Climate Change and Energy Efficiency and the Treasury strongly suggests that it will fail to deliver any such target.

1.27 When asked to comment on the Coalition's direct action policy, the Secretary of the Department of Climate Change and Energy Efficiency voiced doubts about the ability of the policy to meet the bipartisan emissions reduction target:

CHAIR: They [the Coalition] also indicate that the emissions reduction fund that they will establish will purchase 85 million tonnes per annum of CO₂ abatement through soil carbons by 2020. Are you aware of that claim?

Mr Comley: Yes, I am.

CHAIR: Have you done any analysis of whether that is a target that is achievable?

Mr Comley: We have. That analysis is on the public record... We do not think that that would be attainable. The key distinction here, which we have

17 Australian Liberal Party, *The Coalition's Direct Action Plan – Environment and Climate Change*, p. 1, <http://www.liberal.org.au/~media/Files/Policies%20and%20Media/Environment/The%20Coalitions%20Direct%20Action%20Plan%20Policy%20Web.ashx>, (accessed 26 October 2011).

to be very careful about, is that there is a technical potential; that is, what you could technically put into the soil. Then there is a question of whether that is economically viable. Perhaps the best example of that ... is that you can store quite a lot of carbon in so-called extensive grazing land but when you look at the economics of it, it is very unlikely to occur. So where you have grazing and then if you effectively stop grazing you can store, from memory, about a third of a tonne of carbon per hectare per year if you do that. However, if you look at the question of what a farmer makes in profits from running cattle on that land the New South Wales Department of Primary Industries estimated, I think, that the gross profitability of that was around \$85 per hectare. To put it another way, you would have to set aside three hectares of land. Unless the farmer were paid somewhere in the order of \$250 or \$270 per hectare, it is not in their interests to stop grazing. They would rather take the profitability from grazing. The same issue applies across a whole range of soil carbon issues.

The second issue relates to the technical aspects—some of the methodological issues associated with measuring the soil carbon still need to be refined and improved. It is precisely for those reasons that the international community has typically been slower to pick up soil carbon and other non-forest carbon storage in the landscape as a source of abatement which counts towards international commitments.

CHAIR: There is a report in the Financial Review this morning which outlines the Coalition plan. It indicates that they want to purchase 140 million tonnes of abatement per annum by 2020. Would that 140 million tonnes of abatement reach the five per cent?

Mr Comley: No. On our current projections, around 160 megatonnes of abatement are required by 2020—that is taking into account all climate change policies currently in existence other than those associated with the clean energy future package.

CHAIR: So the Coalition policy—just its target—is 20 million tonnes shy of reaching five per cent?

Mr Comley: If you could purchase 140 million tonnes, that would be 20 million tonnes short of the abatement target of 160 megatonnes.

CHAIR: And 85 million tonnes of that is through soil carbon, which you are very uncertain can be achieved?

Mr Comley: Yes, there is that issue, but there is also the broader issue of how much you would have to pay for each of these tonnes to get them in the first place. My recollection of the point we made at our briefing on this issue is that there was a technical and economic viability issue with soil carbon. But probably more to the point is that we would not necessarily expect that you could buy soil carbon cheaper than a lot of other forms of abatement. What we really did is we asked, 'Okay, how much do we think you would probably have to pay for a tonne of carbon?' We then considered the question: do you think you could buy soil carbon demonstrably cheaper than that? We said, 'No, we do not think that is likely in practice,' and therefore we used a common estimate of a potential cost to assess the likely abatement from a direct action policy.

CHAIR: I think direct action factored in between \$8 and \$10 a tonne, did it not?

Mr Comley: It depends. That is about right for land based issues. One of the key issues that would have to be addressed is that in the direct action policy the indication was given that you could do that at \$8 to \$10 a tonne and that you could effectively price discriminate between different types of abatement. So you would not be required to pay the same price.¹⁸

CHAIR: ...[D]o any of those other statements give you any more confidence that direct action would meet a five per cent reduction by 2020?

Mr Comley: Let me come at this in a different way. You asked me earlier whether we stood by the estimates. Our estimates at the time, from memory, were that we thought that, if you were purchasing around 40 megatonnes, you would probably have to pay around \$50 a tonne. I should stress that I would view that as an optimistic estimate. The reason I stress that is, when that analysis was done, I stressed to all the staff involved that we needed to make sure that we were being as conservative as possible—that is, not talking down the capacity for abatement. But at that time we thought an average abatement cost of around \$50 a tonne was reasonable. The direct action policy, from my recollection, quoted a total budget over 10 years. It did not precisely indicate the spend over each year, but we assumed a ramp-up that ended up with \$2 billion a year in the last year, 2020. We simply took that \$50 abatement cost estimate, divided by the \$2 billion and ended up with 40 megatonnes of abatement, which would leave a gap of around 120 megatonnes.

1.28 In announcing their direct action plan, the Coalition also promised that they would achieve a five per cent emission reduction target by 2020 'without new or increased taxes on Australian industries or increased costs to Australian households and families.'¹⁹ This will not be the result at all, rather, implementation of direct action will not only cost the budget more than the government's clean energy future package but that it will also cost families approximately \$1,300 per year.

Senator CAMERON: I have read some reports that Treasury did some analysis of the Coalition's direct action policy and that that policy results in about a \$1,300 cost to each household. Does someone want to comment on that? Is that correct?

Ms Quinn: The advice provided by Treasury has been released under a freedom of information request. The question that that looked at was: 'What would happen going forward to achieve a five per cent reduction in emissions by 2020 if it was not possible to have access to international

18 Mr Blair Comley, Secretary, Department of Climate Change and Energy Efficiency, *Senate Estimates Committee Hansard*, 17 October 2011, pp 15–16.

19 Australian Liberal Party, *The Coalition's Direct Action Plan – Environment and Climate Change*, p. 2, <http://www.liberal.org.au/~media/Files/Policies%20and%20Media/Environment/The%20Coalitions%20Direct%20Action%20Plan%20Policy%20Web.ashx>, (accessed 26 October 2011).

sources of abatement?' That is the case, in our understanding, of the direct action package proposed by the Coalition. If it was the case that Australia was not able to access internationally sourced abatement, based on the modelling done in the Strong Growth, Low Pollution report, it would double the economic cost of achieving a five per cent target by 2020. That is the analysis that is in the public domain.

Senator CAMERON: Is that double the cost to the economy as a whole?

Ms Quinn: Yes.²⁰

1.29 The Coalition's direct action plan is deeply flawed and simply not viable. Direct action will not create investment certainty, will not provide compensation for households and will not achieve Australia's carbon emission reduction targets. The Australian public is therefore left with a choice between two policies, the essentials of which are distilled in the following table:

20 Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division, Macroeconomic Group, Department of the Treasury, *Senate Estimates Economics Committee Hansard*, 20 October, p. 48.

Table 1: Key features of the Government and Coalition's Climate Change Policies

	Government – Clean Energy Future Package	Coalition – Direct Action Plan
Cost to Households	Approximately \$9.90 per week.	Without international linking Mr Abbott's plan will cost \$13 billion in 2020 – that's a new tax of \$1300 per household.
Assistance	Assistance will be provided to households e.g. people earning up to \$80,000 will receive an average tax cut of \$300. Nine out of ten families will receive some form of tax cuts and other assistance.	No assistance for households.
Who pays?	The biggest polluters pay for their pollution, not households.	Taxpayers pay polluters to reduce pollution. Budget deficits will soar.
Resource allocation	The market allocates capital to the most efficient abatement.	The government picks winners.
Investments	Long term investment certainty.	No investment certainty.
Economic Reform	Long term structural reform of the economy.	Stop gap political solution designed to be abandoned when expedient.
Bipartisan emissions targets	Achieves targets – will cut 159 million tonnes a year of carbon pollution by 2020.	Does not achieve targets.

Investment and Business Certainty

1.30 The Coalition and many submitters to this inquiry claim that acting on climate change in the absence of a comprehensive, binding international agreement on carbon pricing will lead to carbon leakage and negatively affect Australia's international competitiveness. Evidence presented to this committee indicates the opposite is true.

1.31 The international community, unlike the Coalition, accepts and acknowledges that climate change is real and that action needs to be taken. What action each nation takes however is still to be determined. However, by taking action early, Australia will provide certainty to investors.

1.32 Providing certainty through the introduction of a market based carbon price mechanism will put Australia at a competitive advantage for years to come. Indeed, this view is supported by the Institutional Investors Group on Climate Change (IIGCC), a global group of 285 investors that represent assets of more than US\$20 trillion:

The countries that have attracted the most investment in low-carbon technologies, renewable energy and energy efficiency have generally been those that have provided long-term certainty around the structure and incentives associated with these investments...

Investors – in particular those making large investments in areas such as infrastructure and power generation – need long-term policy certainty. If policy instruments have a short time horizon or there is the likelihood that future governments will significantly change the policy framework, investors will tend to invest elsewhere.²¹

1.33 The IIGCC in fact suggests that countries that fail to provide policy certainty will struggle to attract investment:

Conversely, many countries have struggled to attract investment because they do not have appropriate policies in place, because the policies are poorly implemented or because the policies do not provide sufficient incentives for investment. **A more recent concern has been the move by some governments to retroactively scale back climate change-related policies and incentives, which has deterred investment in those countries.**²² [emphasis added]

1.34 Indeed, in a report commissioned by the Investor Network on Climate Risk, the Institutional Investors Group on Climate Change, the Investors Group on Climate Change and the United Nations Environment Programme Finance Initiative, it was noted that the Clean Energy Future legislative package provided 'real confidence' for

21 Institutional Investors Group on Climate Change, *2011 Global Investor Statement on Climate Change*, p. 1, 3.

22 Institutional Investors Group on Climate Change, *2011 Global Investor Statement on Climate Change*, p. 2.

investing in renewable energy in Australia. However, it was noted that not all of the risks of investing in Australia had been eliminated. In their report the group identified that the "political risk, in particular that the opposition Liberal Party may unwind elements of the proposals if elected"²³ was of particular concern.

1.35 The Coalition's policy that, if elected to government, they will repeal the carbon price mechanism has the potential to do much damage to business and investment certainty.

Dr Parkinson: ... Again, remember that the cost impacts of the carbon tax or the minerals resource rent tax are very small. The bigger issue in terms of impacts on investment are those that were spelled out in the Shergold review, which is that the continuing uncertainty about the policies that Australia might pursue to respond to climate change was having a very deleterious impact on the investment environment. That is why the Shergold review—the committee of which, as you will recall, was a group of secretaries and very senior people in the private sector—took the view that Australia should not wait for global action but should begin to move to address climate change... and that it was better to do it earlier rather than later, in the form of emissions trading.²⁴

Ms Quinn: ...There has also been a deal of analysis done in Australia about uncertainty in the electricity generation industry. There have been issues around the flow of investments into different technologies in Australia. It has been the case that different technologies are potentially being chosen because of uncertainty around the regulatory regime. It has not necessarily been crucial for the Australian economy because it has not been necessary to have a big step up in base load investment in the electricity generation sector but that investment will be needed over the next five years. We will need to start looking at building new base load sources of energy. Without a clear framework for pricing carbon in Australia it will add to the investment costs of electricity in Australia.²⁵

1.36 When appearing before the Select Committee on the Scrutiny of New Taxes, Mr Nathan Fabian, Chief Executive Officer of the Investor Group on Climate Change, a group representing Australian investors managing \$600 billion of investment funds told the inquiry:

We have concerns [about direct action]. 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

23 US Investor Network on Climate Risk, European Institutional Investors Group on Climate Change, Investors Group on Climate Change - Australia and New Zealand, United Nations Environment Programme Finance Initiative, *Investment-grade Climate Change Policy – Financing the Transition to the Low-Carbon Economy*, 2011, p. 17.

24 Dr Martin Parkinson, Secretary, Department of the Treasury, *Senate Economics Legislation Estimates Committee Hansard*, 20 October 2011, p. 13.

25 Ms Meghan Quinn, General Manager, Macroeconomic Modelling Division, Macroeconomic Group, Department of the Treasury, *Committee Hansard*, 10 August 2011, p. 27.

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 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.²⁶

1.37 Another feature of the government's policy that provides investment certainty is the ability of emitters to advance auction permits. Mr Blair Comley, Secretary of the Department of Climate Change and Energy Efficiency explained to a Senate Estimates Committee how this feature of the legislative package facilitates business and investment certainty:

...What the advance auction of future vintage permits is really about is trying to provide future price information. If you talk to everyone in business, they are asking for the greatest degree of certainty about what the likely carbon obligation is for them. That is both on the side of businesses that have a very strong need to abate and on the side of businesses that have strong abatement options or renewable energy, for example, because they want to get a sense of what they can put in their business plans. What the forward auction of permits is trying to do is have a traded market so people can observe a future price so that when they are doing an investment plan that runs beyond the current year, they have got some better information as to what the price is likely to be.

CHAIR: Does that also promote business certainty?

Mr Comley: It does. But I would explain the answer a little bit. It does help business certainty. With carbon markets and all markets, some people will ask for absolute certainty. That is never going to exist in the same way that you never have absolute certainty about the exchange rate, labour costs or a whole range of other things. Forward auctioning of permits gives you more information than you otherwise would have about a potentially key cost of business. So the longer you have that forward price curve, the greater your degree of certainty. The important point here is that, for some people, it just gives them an estimate of the future price and that may be sufficient. For others, it gives them the capacity to hedge. It gives them the capacity to say, 'It might go up; it might go down. I just want to lock that in and I can buy a forward permit at that point in time.' For them the carbon price uncertainty does not exist at that point in time. From a business decision-making perspective, they then are exposed to the risk that they paid a high price and it turns out to be lower, but if their preference is to eliminate the carbon

26 Mr Nathan Fabian, Chief Executive Officer, Investor Group on Climate Change, *Committee Hansard*, 23 September 2011, pp 29–30.

price risk for their planning, it gives them an option that is not available if you do not have forward auctioning in the same way.²⁷

1.38 Mr Comley went on to explain that the international linkages that the government's Clean Energy Future legislative package provides for will also ensure investment certainty:

Purchase of overseas permits in a sense gives you another hedging option. It does two things. First, it is likely to constrain and reduce the total price of permits because we anticipate international permits would be less expensive over time. Second, it gives you another hedging option. At the moment, you could hedge when we have a forward auction of those or you could hedge with an eligible international unit. Potentially, that would deliver a benefit to consumers of products because the greater the level of risk that a business faces, the more they are going to have to price in a risk premium in their business decisions and ultimately that would lead to a higher cost structure and a higher cost to the consumers of those products. International permits and forward auctioning are both ways of giving hedging opportunities, which ultimately reduce prices.²⁸

1.39 Government senators note that the Coalition's direct action policy does not propose international linking. When appearing before this committee representatives of Loy Yang Power, identified the importance of being able to access international permits.

Senator THISTLETHWAITE: And you will be seeking to purchase those permits internationally as well?

Mr Thompson: We will, yes. In the fullness of time, I am not too sure whether we will start in that space.

Senator THISTLETHWAITE: The department of climate change gave evidence this morning that they had done a study or that Treasury had done a study which demonstrates that if businesses like yours are not able to access international permits on the international market once the carbon trading scheme begins in Australia, it will substantially push up costs.

Mr Thompson: Correct.

Senator THISTLETHWAITE: That is a view that you share as well, is it?

Mr Thompson: Yes, absolutely. Australia is not a large carbon market and Australia would be a price taker on carbon, if international permits are

27 Mr Blair Comley, Secretary, Department of Climate Change and Energy Efficiency, *Senate Environment and Communication Legislation Committee*; Estimates Hansard, 17 October 2011, p. 18.

28 Mr Blair Comley, Secretary, Department of Climate Change and Energy Efficiency, *Senate Environment and Communication Legislation Committee*; Estimates Hansard, 17 October 2011, p. 18.

allowed, depending on what constraints are put around that. And the beneficiaries of that will be the Australian community.²⁹

1.40 Loy Yang are not the only business in the electricity industry that have raised concerns with the Coalition's direct action plan and "pledge in blood" to abolish the carbon price mechanism. Virgin Australia, AGL Energy and Centennial Coal have all raised concerns stating that the Coalition's stance is causing uncertainty and delaying much needed investment.³⁰

Businesses have been counting on the certainty of the legislation to kick-start billions of dollars of new investment in electricity generation and transmission, and said the opposition's threats to abolish the carbon tax has destabilised their plans..."Whilst we have that different approach being taken by the two main parties it is going to make it harder for investors in this sector to commit capital to projects that are dependent one way or another on a price on carbon," Jerry Maycock, the chairman of AGL Energy, one of the country's biggest power and gas suppliers, said.³¹

1.41 The Energy Supply Association of Australia has also stated that further delay in the investment that is needed to meet growing electricity demand will in fact cause power prices to rise.

The [ESAA] estimates that about \$50 billion of investment is required in existing and new energy generation and network assets over the next five years to meet growing demand. To comply with the emissions trading scheme and continue to offer forward electricity contracts to consumers, electricity generators will need access to more than \$10 billion of permits once flexible prices begin, according to the ESAA. "To continue to offer fixed-price power, generators need to be able to hedge the price of carbon by purchasing carbon permits" ... "if they can't, then there will be rises in the power price..."³²

1.42 On the other side of this aspect of the debate, Mr. Ergas, in an opinion piece in *The Australian* newspaper made the unsubstantiated and ridiculous assertion of a carbon price, "climbing towards the hundreds of dollars" that would lead to a likelihood "that the system will eventually be dismantled." This "likelihood" is then the foundation for a different kind of uncertainty in Mr. Ergas' mind to that which the electricity generators face. In a startling bit of sophistry, Mr. Ergas conveniently waves away the very real uncertainty for generators of not moving to a carbon price:

29 Mr Kenneth John Thompson, Loy Yang Marketing Management Company Pty Ltd, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 31.

30 Angela Macdonald-Smith, Perry Williams, 'Abbott stand sparks power price anger', *Australian Financial Review*, 18 October 2011, p. 1.

31 Angela Macdonald-Smith, Perry Williams, 'Abbott stand sparks power price anger', *Australian Financial Review*, 18 October 2011, p. 1.

32 Angela Macdonald-Smith, Perry Williams, 'Abbott stand sparks power price anger', *Australian Financial Review*, 18 October 2011, p. 10.

"True, investors in electricity generation face uncertainty. But that is because the future international environment for carbon pricing is itself highly uncertain. And merely introducing a carbon tax here does nothing to wipe that uncertainty away".³³

1.43 If he is to be consistent, we should expect Mr. Ergas to view the imminent collapse of the Doha Round of international trade negotiations as a signal to bring back protectionism as an antidote to international uncertainty over trade. On this issue, we prefer the evidence of the representatives of the electricity generation industry over the opinion of Mr. Ergas.

1.44 Government senators note with concern the irresponsible actions of the Coalition that are serving only to undermine business and investment certainty, the result being harm to the wider public.

Conclusion

1.45 Government senators acknowledge that achieving major structural reform is hard work, made harder by the pointless obstinacy of the current Coalition. The creation of Medicare, the floating of the dollar, the removal of tariffs and the introduction of superannuation were all met with fierce resistance when they were first proposed yet these same reforms have served Australia well and have resulted in the economic freedoms and successes the country now enjoys. The decision to take the critical step to put a price on carbon will be similarly viewed in the years to come.

1.46 Government senators take the view that the government's Clean Energy Future legislative package creates the right incentives in the economy to reduce pollution in the most efficient way and encourage investment in clean energy technologies. It creates the certainty that business and industry are seeking yet will have only a modest impact on prices. As Treasury modelling has identified, it is expected that prices will only increase by 0.7 per cent in 2012-13 as a result of the introduction of a carbon price, less than a third of the effect on prices that the introduction of the Goods and Services Tax and related changes in 2000-01. The government's modelling shows that many prices, particularly food, will hardly be affected; the biggest cost increase will be utilities. The table below identifies the likely affect on household expenditure.

1.47 The Government will provide assistance to those Australians that need help most, particularly pensioners and low and middle-income households to cover these costs. All up, the average household will see cost increases of \$9.90 per week, while the average assistance will be \$10.10 per week. Households that improve their energy efficiency can end up coming out in front.

33 Professor Henry Ergas, Not a Model way to Sell A Carbon Tax; *The Australian*, 21 October 2011, p.14.

Recommendation: That the Senate pass the government's Clean Energy Future bills so that action is taken from next year to reduce greenhouse gas emissions and meet Australia's emissions reduction targets.

**Senator Doug Cameron
Deputy Chair**

Senator Matt Thistlethwaite

Table 2: Price impact on household expenditure³⁴

Product or service	Price impact 2012-13 (%)
Milk, cheese and other dairy products	0.4
Breads, cakes and cereal products	0.4
Fruit and vegetables	0.4
Meat and seafood	0.4
Restaurant meals and takeaway food	0.4
Clothing, footwear	0.2
Electricity, gas, utilities	7.9
Beer, wine and alcohol	0.2
Travel and accommodation	0.5
Rent	0.6
Hospital and medical services	0.3
Pharmaceuticals	0.3
Audio-visual equipment, computers	0.4
Furniture and furnishings	0.4
Household appliances, utensils and tools	0.8
Education	0.3
Sport and recreation	0.3

34 *The Impact of a Carbon Price on Household Expenditure as modelled by Treasury for the Clean Energy Future Package announced on 10th July 2011 by the Government*; http://www.treasury.gov.au/documents/2118/PDF/Modelling_carbon_price_household.pdf, viewed 27th October 2011.

Government Senators' Dissenting Report: Appendix 1

Table 1 – Summary of parliamentary inquiries concerning climate change³⁵

Committee inquiry	Summary of findings and recommendations
<p>House of Representatives Standing Committee on Environment, Recreation and the Arts: A review of Audit Report No. 32 1992-93—an efficiency audit of the Implementation of an Interim Greenhouse Response (May 1994).</p> <p>http://www.aph.gov.au/house/committee/reports/1994/1994_PP92.pdf</p>	<p>The National Energy Management Program (NEMP) is one of the approaches the Commonwealth Government is taking to achieve its targeted reduction in greenhouse gas emissions. The diverse range of activities which make up the program are likely, at best, to bring about a reduction in carbon dioxide emissions equivalent to only ten per cent of the required target. Although the program consists entirely of 'no-regrets' measures, it is central to the National Greenhouse Response Strategy. It needs to be pursued with as much vigour and commitment as the Department of Primary Industries and Energy can muster.</p> <p>The NEMP should be significantly expanded and there is a need for the Government to commit more resources to it. However, to establish a more effective program the Department first needs to implement the recommendations of the auditors and the consultants.</p> <p>The Committee has made several recommendations which reinforce the findings of the auditors and the consultants and which, if implemented along with their recommendations ;will provide the basis for the expansion of the program. Resources need to be committed which allow the program to expand to a level that will do more towards attaining the Government's greenhouse gas emissions reduction target. The Committee recommends that:</p> <p>(1) the Commonwealth Government make a genuine commitment to the National Energy Management Program and demonstrate its commitment by; providing substantially increased financial and personnel support for the program; and ensuring that the scale of financial and personnel support is commensurate with the objectives of the program</p>

35 Joint Select Committee on Australia's Clean Energy Future Legislation, *Advisory Report on the Clean Energy Bills and the Steel Transformation Bill 2011*, October 2011, pp 6–10.

	<p>and the Government's greenhouse gas emission reduction targets. (Paragraph 2.23)</p> <p>(2) the Government's commitment to the success of the National Energy Management Program be matched by the Executive of the Department of Primary Industries and Energy taking an active leadership role in promoting the program and ensuring that sufficient staff are made available. (Paragraph 2.24)</p> <p>(3) as part of its restructuring of the National Energy Management Program, the Department of Primary Industries and Energy closely examines and scrutinises the program activities currently operating and reduces the number of activities to a level consistent with effective operations and managerial resources. The Department should identify, for continuation, those activities that are the most useful in achieving the objectives of the program. (Paragraph 3.33)</p> <p>(4) as part of the restructuring of the National Energy Management Program, the Department of Primary Industries and Energy should develop and initiate new program activities that will be more effective in achieving targeted reductions in greenhouse gas emissions. (Paragraph 3.34)</p> <p>(5) to facilitate public input to the National Energy Management Program and to generate greater public awareness and interest, a comprehensive report on all programs relating to greenhouse gas emissions be presented to the Parliament annually, shortly after the budget is presented, (Paragraph 3.55)</p> <p>(6) before the end of 1996, the Australian National Audit Office completes a follow-up efficiency audit on the continuing implementation and administration of the National Energy Management Program. (Paragraph 4.7)³⁶</p>
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36 House of Representatives Standing Committee on Environment, Recreation and the Arts, *A review of Audit Report No. 32 1992-93—an efficiency audit of the Implementation of an Interim Greenhouse Response*, May 1994, http://www.aph.gov.au/house/committee/reports/1994/1994_PP92.pdf, (accessed 25 October 2011).

<p>House of Representatives Standing Committee on Environment, Recreation and the Arts: Inquiry into the regulatory arrangements for trading in greenhouse gas emissions (25 August 1998).</p> <p>http://www.aph.gov.au/house/committee/environ/greenhse/gasrpt/contents.htm</p>	<p>Recommendation (1)</p> <p>The Committee recommends that emissions permits be licences to emit, which are issued on terms that are clear, understandable, and known. Permits should not confer property rights.</p> <p>Recommendation (2)</p> <p>The Committee recommends the early trialling of emissions trading in Australia under the following conditions: voluntary participation; based on emissions levels at the start-up date of the trial; without prejudice to the eventual design of the compulsory emissions trading scheme, except for a guarantee of recognition in the compulsory scheme for emissions reductions made during the trial; consideration to be given to preferentially allocating permits in the compulsory scheme to participants in the trial; and continuing consultation about the design of the compulsory scheme.³⁷</p>
<p>Senate Environment, Communications, Information Technology and the Arts References Committee: Renewable Energy (Electricity) Bill 2000; Renewable Energy (Electricity) (Charge) Bill 2000 (August 2000).</p> <p>http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/1999-02/reb2000/report/index.htm</p>	<p>Recommendation 1</p> <p>The Committee recommends that non-plantation native forest wood products and wood wastes be specifically excluded from the list of eligible renewable energy sources.</p> <p>Recommendation 2</p> <p>The Committee recommends that the Renewable Energy (Electricity) Bill 2000 be amended to include the list of eligible renewable energy sources, with the provision for more detailed rules and definitions to be included in the regulations.</p> <p>Recommendation 3</p> <p>The Committee recommends that future reviews of the 2 per cent measure give consideration to mandating a portfolio of sources, a cap on the contribution of any one source and/or a measure, which recognises the greenhouse</p>

37 House of Representatives Standing Committee on Environment, Recreation and the Arts, *Inquiry into the regulatory arrangements for trading in greenhouse gas emissions*, 25 August 1998, <http://www.aph.gov.au/house/committee/environ/greenhse/gasrpt/contents.htm>, (accessed 25 October 2011).

	<p>intensities of particular sources.</p> <p>Recommendation 4</p> <p>The Committee recommends that the legislation be amended to ensure that the shortfall charge is recognised as being a penalty, that it should clearly not be tax deductible and that it be indexed for CPI increases.</p> <p>Recommendation 5</p> <p>The Committee recognises that the penalty may not be adequate to encourage liable entities to purchase Renewable Energy Certificates rather than pay the penalty, and/or that it may not deliver a diverse range of technologies, and recommends that the Government consider increasing the penalty. Failing that, the Committee recommends that the behaviour of wholesalers be closely monitored to assess whether they are choosing to pay the charge in lieu of buying available certificates (i.e. for which generation capacity exists). Should this be the case, the level of the charge should be increased to a level at which higher cost renewables, such as wind, will be competitive.</p> <p>Recommendation 6</p> <p>The Committee recommends that the time available to liable parties to make up a certificate shortfall and have the charge refunded be reduced from 3 years to 1 year, and that the refund be discounted by 50 per cent for that year.</p> <p>Recommendation 7</p> <p>The Committee recommends a regular linear phase-in path of at least 950 GWh each year.</p> <p>Recommendation 8</p> <p>The Committee recommends consideration of possible upward revision of the target be included in future reviews of the 2 per cent renewables measure, with a view to establishing a world-class renewable energy industry and increasing the proportion of renewable generation in the years after 2010.</p> <p>Recommendation 9</p> <p>The Committee recommends that the Government consult</p>
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	<p>with the Western Australian Government about the circumstances of small remote communities in the Pilbara.</p> <p>Recommendation 10</p> <p>The Committee recommends the exclusion of legitimate cogeneration projects from liability under the measure.</p> <p>Recommendation 11</p> <p>The Committee recommends that the Bills be amended to provide that the renewable energy liability cannot be incurred twice for the same block of energy.</p> <p>Recommendation 12</p> <p>The Committee recommends that the Government take steps to ensure that the renewable electricity generation funded by voluntary contributions to Greenpower schemes in most states is additional to the annual targets and that agreement be reached with the states as soon as possible on a process to ensure that this is the case.</p> <p>Recommendation 13</p> <p>The Committee recommends that the Government commences discussions with the States as soon as possible to develop uniform national codes governing interconnections to power grids and uniform arrangements for net metering, which would guarantee a fair price for independent generators.</p> <p>Recommendation 14</p> <p>The Committee recommends that the legislation be amended to provide for a wide-ranging review of the measure to be completed within 3 years. The review should be carried out by an independent person or body and receive public input to both its inquiry and conclusions.³⁸</p>
Joint Standing Committee on Treaties: Report 38	Committee observations

38 Senate Environment, Communications, Information Technology and the Arts References Committee, *Renewable Energy (Electricity) Bill 2000; Renewable Energy (Electricity) (Charge) Bill 2000*, August 2000, http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/1999-02/reb2000/report/index.htm (accessed 25 October 2011).

The Kyoto Protocol – Discussion Paper (April 2001).

<http://www.aph.gov.au/house/committee/jsct/kyoto/kyoto.htm>

2.28 Even the harshest critics of the IPCC do not deny that global warming has occurred.

2.29 The major points of disagreement revolve around: the balance of causes – the extent to which global warming has been influenced by natural phenomena as opposed to human activities; and projections of future temperatures and sea levels – with critics claiming that the IPCC estimates are exaggerated.

2.30 There are validly held differences of opinion within the scientific community on the weight to be attached to various possible causes of global warming and on the likely range of consequences of global warming.

2.31 It is conceivable that as the scientific debate continues, new dimensions and disciplines will be considered, some of which will influence the predicted outcomes of global warming. The continuing refinement of computer-based climate modelling techniques to include new elements is one such example.

2.32 Nevertheless, the balance of scientific opinion is clearly and substantially in favour of the assessments made by the IPCC.

2.33 We note that the Australian Government is prepared to accept the IPCC's opinion that the world's climate has changed over the last 100 years and that human activity has had a discernible impact on that change.

2.34 Moreover, the Australian Government has judged that it is reasonable to be involved in coordinated international action on climate change, as foreshadowed in the UNFCCC and provided for by the Kyoto Protocol, to help mitigate the future risks associated with climate change...

3.43 Debate about the potential social, economic and environmental impacts of the Kyoto Protocol is passionate, often contradictory and, in many respects, likely to continue until the impacts are, one way or another, actually realised.

3.44 If Australia were to ratify the Protocol, some sectors of the economy will be under great pressure to reduce greenhouse gas emissions – by changing operational practices, finding greater efficiencies and implementing

	<p>new technologies. It is not yet clear whether those industries with high rates of fossil fuel use will be able to adapt sufficiently to create sustainable futures. Some members of the Committee are concerned that such industries might collapse: paying the ultimate price for Australia's compliance with the Kyoto Protocol.</p> <p>3.45 On the other hand, it is possible also that new business opportunities will emerge for energy efficient industries or through the development of a national emissions trading market.</p> <p>3.46 Those who argue that the costs of mitigation are greater than the benefits of new opportunities have, at present, more support from the economic modelling that has been done to date. But the models are not without their critics and even those who have conducted the modelling acknowledge that it is not possible to complete an accurate analysis until the final design of the Protocol is agreed upon.</p> <p>3.47 As suggested in our observations at the conclusion of Chapter 2, issues such as the treatment of carbon sinks and the extent of flexibility mechanisms may significantly influence the domestic cost of implementing the Protocol. These issues need to be resolved before a final best estimate of the economic, social and environmental impact of the Protocol can be calculated.</p> <p>3.48 In any event, continuing investment in the development of technologies that promote the cleaner combustion of fossil fuels and the development of alternative sources of energy is a wise focus for the national research effort.³⁹</p>
<p>Senate Environment, Communications, Information Technology and the Arts Legislation Committee: Provisions of Inquiry into the Renewable Energy (Electricity) Amendment</p>	<p>Background – the Mandatory Renewable Energy Target</p> <p>1.3 The bill amends the Renewable Energy (Electricity) Act 2000 and the Renewable Energy (Electricity) (Charge) Act 2000, which established the Mandatory Renewable Energy Target (MRET) scheme.</p> <p>1.4 The original bills establishing the MRET were the</p>

39 Joint Standing Committee on Treaties, *Report 38 The Kyoto Protocol – Discussion Paper*, April 2001, pp 11–12, 33–34, <http://www.aph.gov.au/house/committee/jsct/kyoto/kyoto.htm>, (accessed 25 October 2011)

Bill 2002 (2 December 2002).

http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2002-04/renewable_energy/index.htm

subject of a Senate Environment, Communications, Information Technology and the Arts Legislation Committee inquiry, which reported in August 2000. The scheme also took place in the wider context of a References Committee inquiry into the progress and adequacy of Australia's policies to reduce global warming, resulting in the report titled *The Heat is On: Australia's Greenhouse Future*, tabled in November 2000.

1.5 The Government's renewable energy target places a legal liability on wholesale purchasers of electricity to proportionately contribute towards the generation of an additional 9,500 GWh of renewable energy per year by 2010.

1.6 The measure applies nationally, with all electricity retailers and wholesale electricity buyers on liable grids in all States and Territories contributing proportionately to the achievement of the measure.

...

Conclusions and recommendations

2.35 The Committee supports the changes to the definitions contained in S.17, and in particular, both the focus on sources rather than technologies and the flexibility granted to the Renewable Energy Regulator under proposed subsections 3-5.

2.36 The MRET scheme is intended to encompass and encourage the development of a diverse range of renewable energy sources, and the amendments recommended would assist some of these to reach their full potential. The changes recommended are also consistent with the administrative nature of the bill, and their application would be safeguarded by the new discretionary powers of the Regulator. In particular, the adoption of a single 'biomass' category is consistent with other changes to S.17, while the use of wood waste is already accepted within the operation of the current Act.

2.37 However, the adoption of a definition to include all biomass from 'woody perennials' (i.e. trees) as suggested by Greenfield Resource Options amounts to a more substantial policy change to the regime and should therefore be considered in the 2002 Review.

	<p>...</p> <p>2.42 Although accepting that the standard operations of sugar mill generators could fall within the definition of ‘gaming’, the Committee considers that the amendments are appropriate. For the scheme to have continued credibility, the Regulator must have a broad discretionary power to determine what constitutes gaming in any given instance, especially in the context of the diverse industry involved in the MRET scheme.</p> <p>2.43 The proper operation of the anti-gaming provisions must also be taken in the context of the enhanced information gathering powers for the Regulator contained in proposed Part 11A, together with the broad rights of objection, review and appeal under Part 6 of the Act.</p> <p>2.44 There is no reason to consider that the legitimate operations of sugar mills would be classified as gaming by the Regulator, but it must also be recognised that gaming could occur in the sugar industry, by reason of their use of a readily transportable fuel source and multiple linked power stations. The Committee is not convinced of the necessity to limit or further define the powers envisaged by the bill.</p> <p>...</p> <p>The Committee recommends that the bill be passed, with consideration of the recommendations of this report.⁴⁰</p>
<p>Senate Environment, Communications, Information Technology and the Arts Legislation Committee: Kyoto Protocol Ratification Bill 2003 [No.2] (25 March</p>	<p>Recommendation</p> <p>5.94 The Committee recommends:</p> <p>That the Kyoto Protocol Ratification Bill 2003 [No. 2] not be proceeded with.⁴¹</p>

40 Senate Environment, Communications, Information Technology and the Arts Legislation Committee, *Provisions of Inquiry into the Renewable Energy (Electricity) Amendment Bill 2002*, 2 December 2002, pp 1–2, 16–18, 33.
http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2002-04/renewable_energy/index.htm, (accessed 25 October 2011).

41 Senate Environment, Communications, Information Technology and the Arts Legislation Committee, *Kyoto Protocol Ratification Bill 2003 [No.2]*, 25 March 2004,
http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2002-04/kyoto/index.htm, (accessed 25 October 2011).

<p>2004).</p> <p>http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2002-04/kyoto/index.htm</p>	
<p>Senate Environment, Communications, Information Technology and the Arts Legislation Committee: Provisions of the Renewable Energy (Electricity) Amendment Bill 2006 (9 May 2006).</p> <p>http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2004-07/renewableenergy/report/index.htm</p>	<p>There was general support for the majority of amendments to the Renewable Energy Bill, which can be attributed to the administrative – and fairly uncontentious – nature of the amendments...</p> <p>The bill seeks to streamline elements of the energy industry and promote market transparency. Whilst it was clear from evidence to the inquiry that the bill does not address a key concern of submitters – that is, changes to the MRET scheme – the amendments proposed will implement small, but important changes to the operation of the energy market in Australia.</p> <p>The committee recommends that the bill be passed.⁴²</p>
<p>Senate Environment, Communications, Information Technology and the Arts References Committee: Budgetary and environmental implications of the Government's Energy White Paper (16 May 2005).</p> <p>http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2004-07/energy_white_paper/report/index.htm</p>	<p>Recommendation 1</p> <p>The Committee recommends that the Government, in consultation with energy interest groups and the energy industry, develop a detailed long-term strategy that includes specific CO₂ emissions reduction targets for 2010, 2020 and 2030, with the ultimate goal of reducing greenhouse emissions by at least 60% by 2050 [para. 4.12].</p> <p>Recommendation 2</p> <p>The Committee recommends that the Government set abatement timeframes and raise the abatement targets for projects seeking funding through the Low-Emissions Technology Development Fund [para. 4.17].</p> <p>Recommendation 3</p> <p>The Committee recommends that the Government: recognise that geosequestration is one of many options for</p>

42 Senate Environment, Communications, Information Technology and the Arts Legislation Committee, *Provisions of the Renewable Energy (Electricity) Amendment Bill 2006*, 9 May 2006, http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2004-07/renewableenergy/report/index.htm, (accessed 25 October 2011)

reducing Australia's CO₂ emissions; and ensure that the greater proportion of the Low Emissions Technology Fund is made available to technologies which can provide emission reductions in the short term; fund only cost and abatement effective research and development on the basis of the principle that the polluter pays; and extend the life of the Low Emissions Technology Fund to cover the timeframe set out for emissions reductions targets, namely a reduction of at least 60% by 2050 [para. 4.26].

Recommendation 4

The Committee recommends that the Government provide incentives to encourage the uptake of current energy efficiencies, such as by adopting the NSW BASIX energy efficiency scheme on a national basis [para. 4.30].

Recommendation 5

The Committee recommends that the Government continue to fund the Photovoltaic Rebate Programme (PVRP), and set targets for the installation of standalone (RAPS) Photovoltaic (PV) energy systems and for grid-connected PV energy systems [para. 4.38].

Recommendation 6

The Committee recommends that the Government re-examine the projected costs of increasing the MRET to at least 5% by 2010, to 10% by 2020, and 50% by 2050, and if it is not prepared to do this, provide infrastructure grants for renewable energy developments [para. 4.39].

Recommendation 7

The Committee recommends that the Government not proceed with the proposed reductions in excise on diesel and petrol in the EWP, unless the decision to impose excise on biofuels and gaseous fuels by 2012 is reversed [para. 4.44].

Recommendation 8

The Committee recommends that the Government develop a more comprehensive policy framework that will set stronger market incentives to invest in energy efficiencies and mandate standards for CO₂ abatement with specific, quantifiable and meaningful targets [para. 4.47].

	<p>Recommendation 9</p> <p>The Committee recommends that the Government move to review its own operations in order to achieve maximum energy efficiencies and CO2 abatement prior to 2010 [para. 4.48].</p> <p>Recommendation 10</p> <p>The Committee recommends that the Government introduce a carbon trading scheme, or at least provide support for the states' carbon trading scheme, and mandate maximum levels of carbon emissions for Australia, according to diminishing benchmarks towards the goal of 60% by 2050 [para. 4.51].</p> <p>Recommendation 11</p> <p>The Committee recommends that the Government reconsider the benefits of a carbon tax as a tool to reduce carbon emissions in the industrial sector [para. 4.52].</p>
<p>House Standing Committee on Environment and Heritage: Inquiry into sustainable cities (12 September 2005).</p> <p>http://www.aph.gov.au/house/committee/enviro/cities/report.htm</p>	<p>Recommendation 1</p> <p>The committee recommends that the Australian Government: establish an Australian Sustainability Charter that sets key national targets across a number of areas, including water, transport, energy, building design and planning; encourage a Council of Australian Governments agreement to the charter and its key targets.</p> <p>Recommendation 2</p> <p>The committee recommends that all new relevant Australian Government policy proposals be evaluated as to whether they would impact on urban sustainability and if so, be assessed against the Australian Sustainability Charter and the COAG agreed sustainability targets.</p> <p>Recommendation 3</p> <p>The committee recommends that: the Australian Government establish an independent Australian Sustainability Commission headed by a National Sustainability Commissioner; task the Commission with monitoring the extent to which Commonwealth funds and State and Territory use of Commonwealth funds promotes the COAG agreed sustainability targets; and task the</p>

Commission with exploring the concept of incentive payments to the States and Territories for sustainability outcomes along the lines of the National Competition Council model.

Recommendation 4

The committee recommends that the Department of Transport and Regional Services raise with the Development Assessment Forum the proposal to extend membership of the forum to representatives from the Department of Environment and Heritage and the CSIRO.

Recommendation 5

The committee recommends that the Department of Transport and Regional Services, in consultation with the Department of the Environment and Heritage, investigate options to extend the Roads to Recovery programme to include other modes of transport as a step towards including sustainability in the funding criteria.

Recommendation 6

The committee recommends that: transport infrastructure planning decisions be benchmarked against the recommended Australian Sustainability Charter; and the Australian Government significantly boost its funding commitment for public transport systems, particularly light and heavy rail, in the major cities.

Recommendation 7

The committee recommends that the provision of Australian Government transport infrastructure funds include provision of funding specifically for sustainable public transport infrastructure for suburbs and developments on the outer fringes of our cities.

Recommendation 8

The committee recommends that the Australian Government review the current FBT concessions for car use with a view to removing incentives for greater car use and extending incentives to other modes of transport.

Recommendation 9

The committee recommends that the Australian

	<p>Government review the tariff policy on four wheel drive vehicles with a view to increasing the tariff rate on four wheel drive vehicles, except for primary producers and others who have a legitimate need for four wheel drive capability.</p> <p>Recommendation 10</p> <p>The committee recommends that the Australian Government provide adequate funding to develop new programmes and support existing programmes, such as TravelSmart and the National Cycling Strategy, that promote and facilitate public and active transport options.</p> <p>Recommendation 11</p> <p>The committee recommends that the Department of Transport and Regional Services investigate developing emission standards for older vehicles and work with the States and Territories with a view to instituting mandatory testing and reporting at point of sale.</p> <p>Recommendation 12</p> <p>The committee recommends that COAG, as part of the National Water Initiative, fund an education campaign educating the public about the benefits, economics and safety of using recycled water.</p> <p>Recommendation 13</p> <p>The committee recommends that the National Water Commission, in consultation with the States and Territories and the public, prepare an independent and transparent report on water options for each of the Australian capital cities and major regional centres.</p> <p>Recommendation 14</p> <p>The committee recommends that the Department of the Environment and Heritage undertake a public education campaign to increase community awareness of the Water Efficiency Labelling and Standards Scheme.</p> <p>Recommendation 15</p> <p>The committee recommends that the Australian Government ensure research and development regarding water resource management takes into account Water</p>
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Sensitive Urban Design principles.

Recommendation 16

The committee recommends that the Australian Government commission research, either as part of the National Water Initiative or separately, to consider the economic viability and environmental benefits of decentralised water management systems.

Recommendation 17

The committee recommends that the Australian Government encourage the States and Territories to mandate disclosure of the energy efficiency and greenhouse performance of residences at point of sale and point of lease.

Recommendation 18

The committee recommends that the Australian Government, possibly through the CSIRO, investigate the value of a mass balance analysis for Australia.

Recommendation 19

The committee recommends that the Australian Government, in consultation with the Housing Industry of Australia, CSIRO and other industry and scientific bodies, investigate the establishment of a 'sustainable building material' labelling system.

Recommendation 20

The committee recommends that the Australian Government encourage the States and Territories to put in place a regime whereby approval for major residential and commercial renovations is conditional upon meeting energy efficiency and greenhouse performance requirements.

Recommendation 21

The committee recommends that the Department of the Environment and Heritage and the Australian Building Codes Board work with industry groups to raise awareness among builders, architects and developers of the economic and environmental benefits of sustainable building practices, including reusing and recycling building

	<p>materials.</p> <p>Recommendation 22</p> <p>The committee recommends that the Australian Building Codes Board develop a nationally consistent building ratings tool that takes into account the range of environmental and sustainability factors dealt with by existing codes.</p> <p>Recommendation 23</p> <p>The committee recommends that the Australian Government increase the First Home Owner grant to \$10,000 for those homes that meet a high standard of specified sustainability criteria and that these criteria be: stringent; and within the abilities of an HIA accredited builder.</p> <p>Recommendation 24</p> <p>The committee recommends that those States and Territories that do not have a 5 star rating system implement one as a priority.</p> <p>Recommendation 25</p> <p>The committee recommends that Australian Government departments and agencies that own property take steps to improve the sustainability of those buildings, at least to the 5 star rating, and that departments and agencies that rent property consider measures to improve building efficiency when seeking tenancy agreements.</p> <p>Recommendation 26</p> <p>The committee recommends that the Australian Government double the photovoltaic rebate to further encourage the uptake of photovoltaic systems.</p> <p>Recommendation 27</p> <p>The committee recommends that the Australian Government further develop its commitment to energy sustainability, particularly in the area of increasing the use of renewable energy.</p> <p>Recommendation 28</p>
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The committee recommends that the Australian Government, through the National Framework for Energy Efficiency, examine the economic and environmental benefits of decentralised energy delivery and encourage investment in this area.

Recommendation 29

The committee recommends the Australian Government investigate US and German initiatives in the area of solar energy generation and purchase, and, where appropriate, implement or emulate them.

Recommendation 30

The committee recommends that the Australian Government: conduct an audit of existing research and funding opportunities for issues relating to the built environment and urban policy to ensure the adequacy of technical and policy research in this area; and, give consideration to nominating the built environment as a national research priority.

Recommendation 31

The committee recommends that, with reference to the Swedish model of environmental objectives, the Australian Government: develop an accessible and identifiable set of national environmental (or sustainability) objectives for Australia (based on the Australian Sustainability Charter recommendation in chapter 3); implement a national report card for Australia which represents transparently and simply our progress towards the objectives; and encourage similar programmes at a community level, possibly emulating the Tidy Towns or Celebrate WA programmes, but focusing on sustainability.

Recommendation 32

The committee recommends that Australia investigate opportunities to establish a Sustainable Cities network across Australia and Asia, and extend its regional and international commitment to urban sustainability through avenues such as: Technology and research exchange; Pilot demonstration projects, particularly in the area of water and waste treatment; Increased aid for social development

	in urban areas; and Local government partnership programmes. ⁴³
<p>Senate Economics Legislation Committee: Inquiry into the provisions of the Energy Efficiency Opportunities Bill 2005 (10 November 2005):</p> <p>http://www.aph.gov.au/senate/committee/economics_ctte/completed_inquiries/2004-07/energy/report/index.htm</p>	<p>The Committee is of the view that this Bill requires further work before it can be passed by the Senate. In particular, the Committee is concerned about the testimony of a number of witnesses that they were surprised about its contents, despite an extensive consultation process. The Committee is also concerned that a number of substantive issues in relation to the Bill are to be introduced by regulation instead of being incorporated in the body of the Bill. This need to rely on as yet unseen regulations indicates that the Bill is being introduced before many substantive issues have been resolved.</p> <p>Further, the Bill provides for what appear to be excessively severe penalties for compliance breaches, and inappropriately wide powers to conduct inspections, in what is intended to be an essentially co-operative approach to improving energy use efficiency. There are also unresolved issues about the treatment of commercially sensitive information. For these reasons, the Committee considers that the Government should withdraw the bill for re-drafting.</p> <p>Recommendation 1</p> <p>2.39 The Committee recommends that the Bill not proceed unless amended:</p> <p>(i) to give a clear indication to corporations and individuals affected by it of the extent of their obligations and liabilities on the face of the Statute itself, rather than delegating them to regulations;</p> <p>(ii) to change the penalty provisions in clause 29(3) to a level more appropriate to the nature of a regulatory statute, and in particular, by removing the custodial penalty;</p> <p>(iii) to provide that the signing obligation in clause 22(4)(b) of the Bill be placed on the Chief Executive Officer, or some other suitable senior executive officer, not the Chairman of the Board; and</p>

43 House Standing Committee on Environment and Heritage, *Inquiry into sustainable cities*, 12 September 2005, <http://www.aph.gov.au/house/committee/environ/cities/report.htm>, (accessed 25 October 2011).

	(iv) to provide more appropriate and stronger protection for commercially sensitive and confidential information.
<p>House Standing Committee on Environment and Heritage: Inquiry into a Sustainability Charter, 'Sustainability for survival: creating a climate for change' (5 September 2007).</p> <p>http://www.aph.gov.au/house/committee/environ/charter/report.htm</p>	<p>In its report, Sustainable Cities, tabled 12 September 2005, the Committee recommended that the Australian Government establish an Australian Sustainability Charter. While there is considerable support for the concept of a Sustainability Charter, there is also much debate about nearly all aspects of developing and implementing one. The Committee thought it would be useful to identify and flesh out some of the more contentious issues surrounding a Sustainability Charter and to make concrete recommendations. On 16 February 2006 it therefore resolved, under provisions of the House of Representatives standing order 215(c), to undertake an inquiry into a Sustainability Charter. Its recommendations follow.</p> <p>Recommendation 1</p> <p>The Committee recommends that within the first six months of the 42nd Parliament, the Minister for the Environment and Water Resources introduce a Bill for an Act to establish a statutory national Sustainability Commission, headed by a Sustainability Commissioner.</p> <p>In drafting this legislation, the Australian Government should seek input from the state and territory governments.</p> <p>In the Committee's view, and drawing from some of the suggestions made in submissions, the legislation should outline the ongoing roles of the Commission and Commissioner.</p> <p>The ongoing role of the Commission should involve: defining what sustainability means to Australia; creating an aspirational Sustainability Charter with objectives and milestones; creating a supplementary technical implementation agreement containing targets; evaluating progress towards meeting national sustainability goals, objectives and targets and reporting on this to both Houses of Federal Parliament; conducting inquiries into sustainability matters, recommending remedial measures for unsustainable practices and gaps in policies and acknowledging those that are sustainable; reviewing (when necessary) national sustainability goals, objectives and targets; building and strengthening partnerships with government, industry and the community (nationally and</p>

internationally); □ influencing and guiding government, industry and the community in advancing sustainability outcomes; collecting, maintaining and disseminating information on sustainability, including national performance statistics.

The Commissioner should: head the office of the national Sustainability Commission and chair the advisory committee; be an independent statutory officer; be appointed with support of the government and the parliament for a 10 year, non-renewable period; be removed from office only by agreement of both Houses of Parliament on the grounds of misconduct, neglect of duty, or physical or mental incapacity; report annually to parliament; seek input from bodies such as the Commonwealth Scientific and Industrial Research Organisation in defining scientifically sound

Targets; have wide powers of access to people, places and papers in undertaking his/her duties; represent Australia at international sustainability forums; be bound by the functions and powers of the enabling legislation as well as meeting the obligations under the Public Service Act 1999 (Commonwealth); undertake and oversee (as appropriate) the duties of the Commission; draw upon existing sustainability measures.

Further, the legislation should provide for: the establishment of an advisory committee, chaired by the Commissioner and comprised of government, industry and community sustainability champions; informational and performance reporting against the Charter.

Recommendation 2

The Committee reiterates its recommendation in the Sustainable Cities report to establish a national Sustainability Charter.

The Charter should: be aspirational; define sustainability in an Australian context; contain clear and concise overarching objectives and timeframes.

The supplementary technical implementation agreement should: contain targets that are closely aligned with the objectives of the Charter; be used primarily by government and industry.

	<p>The scope of the Charter should, at a minimum, cover the following sustainability sectors: the built environment; water; energy; transport; ecological footprint; economics; waste; social equity and health; community engagement and education; and integrate their related components.</p> <p>The process used for devising the Charter and supplementary technical implementation agreement should be transparent, participatory and inclusive.</p> <p>Recommendation 3</p> <p>The Committee recommends the Australian Government take a leadership role in advancing sustainability outcomes, not only through the measures outlined in Recommendation 1, but also through: the use of monetary and non-monetary incentives for governments, industry and the community in advancing sustainability outcomes; assessing existing and future policy against the proposed Sustainability Charter.</p>
<p>Senate Standing Committee on Environment, Communications, Information Technology and the Arts: National Greenhouse and Energy Reporting Bill 2007 [Provisions] (6 September 2007).</p> <p>http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/2004-07/greenhouse/report/index.htm</p>	<p>The committee noted the Commonwealth's intention regarding clause 5, expressed in the Explanatory Memorandum, 'is to work cooperatively with State and Territory governments to transition towards a single reporting system across all jurisdictions'. The committee supports the continuing cooperation between governments in implementing a national greenhouse reporting scheme. It is pleased to note that all parties remain committed to making progress with this initiative, and believes that some fine tuning of clause 5 may help ensure that this cooperation continues.</p> <p>Recommendation 1</p> <p>The committee recommends that clause 5 be re-drafted along the lines proposed by Professor Williams and others, to have the effect that the minister may by regulation exclude the operation of a state or territory law that duplicates reporting under the national reporting scheme.</p> <p>Recommendation 2</p> <p>The committee recommends that: subclause 27(1) be redrafted to replace the word 'may' with the word 'must'; and (for consistency) consideration be given to the deletion of subclause 27(2)(c).</p>

	<p>Conclusion</p> <p>The committee is satisfied with the bill as a whole. The committee believes that the bill lays the foundation for a rigorous, transparent and nationally consistent greenhouse and energy reporting system. This will also help form the vital foundation for any future emissions trading scheme in Australia.</p> <p>The committee recognises the need, expressed by many stakeholders, for on-going consultation in the development of the regulations that will underpin the proposed system. The committee is confident that the government is committed to processes that will ensure constructive dialogue with stakeholders in the development of these regulations.</p> <p>Recommendation 3</p> <p>The committee recommends that, apart from those recommendations made above, the bill be passed.</p>
<p>Senate Standing Committee on Economics: Inquiry into the National Market Driven Energy Efficiency Target Bill 2007 [2008] and Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008 (30 May 2008).</p> <p>http://www.aph.gov.au/senate/committee/economics_ctte/nmdeet_08/report/index.htm</p>	<p>Conclusion</p> <p>As the MRET scheme is strongly linked to the proposed ETS, it is premature to amend the renewable energy power percentages without having regard to the wider implications of any pre-ETS alterations. The intent of the bill in promoting renewable energy use is not the main issue of concern of the committee, as this is in line with the government's policy to increase renewable energy use by 2020. Therefore, the committee agrees in general with the intentions of the bill.</p> <p>In addition, amending the existing MRET scheme when the government has yet to release details of the emissions trading scheme and related renewable energy schemes is not an optimum approach. To do so could impose obligations on industry, consumers and other stakeholders that may be inconsistent with any aspects of the scheme relating to and promoting the use of renewable energy.</p> <p>Recommendation</p> <p>As an emissions trading scheme and its implementation mechanisms have yet to be finalised, the committee recommends this bill not be passed.</p>

Joint Standing Committee on Treaties: Report 100: Review into treaties tabled on 25 June 2008 (2) – Kyoto Protocol to the United Nations Framework Convention on Climate Change (19 March 2009).

<http://www.aph.gov.au/house/committee/jsct/25june2008/report2.htm>

Global heating

Recommendation 1

The Committee finds that it is in Australia's interests to secure global agreement to deliver deep cuts in emissions so as to stabilise concentrations of greenhouse gases in the atmosphere at 450 parts per million or lower by 2050.

Addressing climate change

Recommendation 2

The Committee recommends that the Australian Government be willing to adopt a policy setting to reduce Australia's emissions of greenhouse gases by 80 percent by 2050 in seeking agreement from other developed countries to also cut emissions by 80 percent by 2050.

Recommendation 3

The Committee recommends that the Australian Government pursue the creation of an international carbon market as the primary mechanism for reducing greenhouse gas emissions.

Recommendation 4

The Committee recommends that the Australian Government take the following position to the 15th Conference of the Parties to the United National Framework Convention on Climate Change in Copenhagen, Denmark: that the international community reach an agreement to stabilise greenhouse gas emissions at around 450 parts per million or lower of carbon equivalent; that the agreement distribute responsibilities for reducing greenhouse gas emissions across nations by requiring developed nations to reduce emissions by 80 percent by 2050, with the residual reductions distributed fairly between developing and transitional nations; and that the agreement establish an international carbon market as the primary mechanism for achieving the necessary reductions.

Greenhouse gas reductions in Australia

Recommendation 5

The Committee recommends that the Australian Government work through the Council of Australian Governments to establish a high quality integrated public transport system including light rail technology.

Recommendation 6

The Committee recommends that the Australian Government endeavour to move to 'full carbon accounting' to ensure that emissions resulting from forestry activities as well as biosequestration are accurately accounted for.

Recommendation 7

The Committee recommends that the Australian Government, through both the Council of Australian Governments and ongoing work on the Carbon Pollution Reduction Scheme, and in consultation with relevant indigenous communities, explore ways to reduce greenhouse gas emissions from savannah burning.

Recommendation 8

The Committee recommends that promising renewable energy technologies which are not cost-competitive at the moment, including geothermal, solar thermal, large scale photovoltaic and wave energy, are further supported.

Recommendation 9

The Committee recommends that the Australian Government establish a coordinating mechanism through the Council of Australian Governments to ensure integration and coordination of greenhouse gas reduction actions across all States, Territories and levels of government, including local and State government planning processes.

Climate change adaptation in Australia

Recommendation 10

The Committee recommends that the Australian Government direct the Australian Building Codes Board to review the Building Code of Australia to ensure that it better provides for energy efficiency standards suitable for varied climate zones.

	<p>Recommendation 11</p> <p>The Committee recommends that the Australian Government investigate using revegetation as an adaptation mechanism to reduce temperature and increase rainfall in applicable parts of Australia.</p> <p>Recommendation 12</p> <p>The Committee recommends that the Australian Government conduct an inquiry into adaptation strategies for climate change. This inquiry should include consideration of projected sea-level rise due to climate change and its impact upon Australian coastal communities and neighbouring countries.</p>
<p>House Standing Committee on Primary Industries and Resources Inquiry into the Draft Offshore Petroleum Amendment (Greenhouse Gas Storage) Bill, 'Down under: Greenhouse Gas Storage' (15 August 2008).</p> <p>http://www.aph.gov.au/house/committee/pir/exposuredraft/report.htm</p>	<p>General</p> <p>Recommendation 1</p> <p>The Committee recommends the inclusion within the Bill of an objects clause, providing that the legislation: provide greenhouse gas injection and storage proponents with the certainty needed to bring forward investment; and preserve pre-existing rights of the petroleum industry as far as is practicable to minimise sovereign risk to existing titleholders' investment in Australia's offshore resources.</p> <p>Recommendation 2</p> <p>The Committee recommends that the responsible Commonwealth Minister utilise established formal consultation pathways to consult with State Governments, industry and environmental organisations, with a view to achieving national consistency in the administration of GHG storage legislation.</p> <p>Access and property rights</p> <p>Recommendation 3</p> <p>The Committee recommends that no acreage be automatically excluded from consideration for selection on the grounds of pre-existing petroleum activities.</p> <p>Recommendation 4</p> <p>The Committee recommends that the process for</p>

	<p>identifying and shortlisting acreage for release should be transparent and systematic, and should consider the views and submissions of all relevant stakeholders.</p> <p>Recommendation 5</p> <p>The Committee recommends that the criteria established for assessing work bid applications facilitates the uptake of CCS activities while maintaining transparency and consistency.</p> <p>Recommendation 6</p> <p>The Committee recommends that the legislation be amended to allow for a GHG assessment permit holder to apply for a single right of renewal for a maximum three years duration.</p> <p>Recommendation 7</p> <p>The Committee recommends that the GHG injection and storage rights conferred under s.137 of the Offshore Petroleum Act 2006 be maintained where practical.</p> <p>Recommendation 8</p> <p>The Committee recommends that the Government review the Offshore Petroleum Act and proposed amendments to provide for the development of integrated petroleum projects, including the injection and storage of GHG from multiple sources into a single storage formation.</p> <p>Managing interactions</p> <p>Recommendation 9</p> <p>The Committee recommends that the Bill be amended to provide for the responsible Commonwealth Minister to direct the parties to negotiate in good faith where there are potential or actual overlapping GHG storage and petroleum titles, under both pre-commencement and post-commencement petroleum titles; and that the responsible Commonwealth Minister be empowered to direct an outcome.</p> <p>Recommendation 10</p> <p>The Committee recommends that the regulations and guidelines attendant upon the legislation are released for</p>
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	<p>stakeholder and public comment as a matter of urgency.</p> <p>Investment certainty</p> <p>Recommendation 11</p> <p>The Committee recommends that incumbent petroleum operators be offered a one-off opportunity to incorporate a GHG assessment permit over their exploration or production licence, with the condition that they must demonstrate utilisation of this permit within five years, or surrender it.</p> <p>Recommendation 12</p> <p>The Committee recommends that those proponents who can demonstrate a readily available CO₂ stream for imminent injection receive preferential consideration when assessing bids for GHG acreage allocation.</p> <p>Recommendation 13</p> <p>The Committee recommends that the Government consider further financial incentives for the earliest movers in this new industry, and that these incentives be made public at the earliest opportunity.</p> <p>Recommendation 14</p> <p>The Committee recommends that a process for the formal transfer of long term liability from a GHG operator to the Government be established within the proposed legislation, such transfer to be conditional upon strict adherence to prescribed site closure criteria.</p> <p>GHG storage</p> <p>Recommendation 15</p> <p>The Committee recommends that general criteria for achieving a site closing certificate be established and published as part of the implementation of the legislation.</p> <p>Recommendation 16</p> <p>The Committee recommends that non-fixed closure timeframes as currently prescribed within the proposed legislation be used in preference to alternative models such as fixed term closure periods.</p>
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	<p>Recommendation 17</p> <p>The Committee recommends that community and stakeholder engagement strategies be considered as part of any GHG storage activity.</p> <p>Recommendation 18</p> <p>The Committee recommends consideration be given to making monitoring data associated with GHG storage project publicly available.</p> <p>Recommendation 19</p> <p>The Committee recommends the use of consultative pathways to provide feedback on the wider community's concerns to the responsible Commonwealth Minister.</p>
<p>Senate Standing Committee on Environment, Communications and the Arts: Inquiry into Save Our Solar (Solar Rebate Protection) Bill 2008 (25 August 2008).</p> <p>http://www.aph.gov.au/Senate/committee/eca_ctte/solar_rebate/report/index.htm</p>	<p>Recommendation 1</p> <p>The committee recommends that the government: Continue to provide support to households to take up renewable energy and energy efficiency initiatives, including through schemes such as the SHCP; Give consideration to providing incentives to householders to install larger photovoltaic systems; and as part of its deliberations with COAG on feed-in tariffs, note industry preference for the introduction of a feed-in tariff scheme as a sustainable, long term mechanism to encourage domestic uptake of solar energy systems.</p> <p>Recommendation 2</p> <p>Coalition Senators recommend the Rudd Government reverse the means test and provide certainty to industry with ongoing funding of the rebate for the next five years.</p> <p>Recommendation 3</p> <p>Coalition Senators recommend the Rudd Government strongly consider a national feed-in tariff system and immediately begin consultation with the solar industry and experts to establish the most cost effective mix of tariffs and rebates to maximise environmental outcomes.</p>
<p>Senate Standing Committee on Economics: Inquiry into the Offshore Petroleum</p>	<p>Recommendation 1</p> <p>The committee recommends that the Senate pass the bill.</p>

<p>Amendment (Greenhouse Gas Storage) Bill 2008 & 3 related bills (23 September 2008).</p> <p>http://www.aph.gov.au/senate/committee/economic_ctte/offshore_petro_08/report/index.htm</p>	<p>Recommendation 2</p> <p>The committee recommends that the operation of the bill be reviewed three years after its proclamation.</p> <p>Recommendation 3</p> <p>That the government consider establishing an expert panel to advise the minister on matters of site selection, licensing, regulation, monitoring and environmental impact and site closures. Such advice should be made public.</p> <p>Recommendation 4</p> <p>The committee recommends that the government reject calls for it to assume explicitly longer-term liability for any leakage from carbon storage projects. Rather, it should investigate the means by which those companies undertaking such projects can contribute to the future costs of coping with any such leakage.</p>
<p>Senate Standing Committee on Rural and Regional Affairs and Transport: Inquiry into the Implementation, Operation and Administration of the Legislation Underpinning Carbon Sink Forests (23 September 2008).</p> <p>http://www.aph.gov.au/senate/committee/rrat_ctte/carbon_sink/report/index.htm</p>	<p>Recommendations</p> <ol style="list-style-type: none"> 1. The Guidelines should be mandatory regulations. 2. There should be incorporated into the regulations conditions which must be met before the tax deductions would apply, namely; the carbon sink forests must be registered on the property title; no native vegetation can be cleared for or converted to carbon sink forests; carbon sink forests should be biodiverse and cannot be harvested or cleared, and no carbon sink forest can be established in the absence of a hydrological analysis including ground water and interception, of the proposed area to be planted. 3. To avoid the destruction of rural communities and the displacement of food crops, prime agricultural land must be excluded from carbon sink plantings.
<p>Senate Standing Committee on Environment, Communications and the Arts: Inquiry into the Renewable Energy (Electricity) Amendment (Feed-in-Tariff) Bill 2008</p>	<p>Recommendation 1</p> <p>Noting strong industry, consumer and government support for FIT schemes, the committee recommends that the Commonwealth government, through COAG, work as quickly as practicable to implement a FIT framework that is as far as possible nationally uniform and consistent.</p>

<p>(10 November 2008).</p> <p>http://www.aph.gov.au/Senate/committee/eca_ctte/renewable_energy/report/index.htm</p>	<p>Recommendation 2</p> <p>The committee recommends that all governments consider carefully the evidence received by this Senate inquiry regarding metering, as well as the track record of existing FIT schemes overseas, in designing a nationally consistent FIT framework for Australia.</p> <p>Recommendation 3</p> <p>The committee recommends that a more regular system of payments to generators be considered than the annual payments in the proposed bill.</p> <p>Recommendation 4</p> <p>The committee recommends that tariff depression rates form part of the nationally consistent FIT framework, but that there also be capacity for depression rate 'pauses' to be instituted following a rate review procedure.</p> <p>Recommendation 5</p> <p>The committee recommends that tariff depression rates be technology-specific.</p> <p>Recommendation 6</p> <p>While strongly supporting a nationally consistent feed-in tariff framework, the committee recommends the current bill not proceed.</p>
<p>Senate Standing Committee on Rural and Regional Affairs and Transport: Inquiry into Climate Change and the Australian Agricultural Sector (4 Dec 2008).</p> <p>http://www.aph.gov.au/senate/committee/rrat_ctte/climate_change/report/index.htm</p>	<p>Recommendation 1</p> <p>The Government should significantly increase the research effort in relation to the potential of soil carbon as a climate mitigation measure, as a means of reducing the capital input costs to agriculture as a means of increasing resilience in agricultural systems.</p> <p>Recommendation 2</p> <p>The committee recommends that the Government should provide for a full carbon accounting framework in relation to agricultural and forestry sectors in a domestic emissions trading scheme.</p> <p>Recommendation 3</p>

	<p>DAFF should prioritise strategic planning for climate change mitigation and adaptation in agriculture and rural communities and play a greater leadership role than is currently the case.</p>
<p>Senate Select Committee on Fuel & Energy (30 August 2010).</p> <p>http://www.aph.gov.au/Senate/committee/fuelenergy_ctte/final_report/index.htm</p>	<p>Recommendation 1</p> <p>The committee recommends that, in the new Parliament, the Senate re-establish the Select Committee on Fuel and Energy with the same terms of reference as the current committee, empowered to consider all the evidence and records received by it and for the specific purpose of completing and tabling a comprehensive report on the findings of the committee.</p>
<p>Senate Standing Committee on Economics: Inquiry into the Exposure draft of the legislation to implement the Carbon Pollution Reduction Scheme (16 April 2009):</p> <p>http://www.aph.gov.au/senate/committee/economics_ctte/cprs_09/report/index.htm</p>	<p>Recommendation 1</p> <p>The Committee recommends that the bills should be passed without delay.</p> <p>Recommendation 2</p> <p>The Committee recommends that the Government coordinates and advances a whole of government approach to jobs and skills in emerging low pollution industries.</p> <p>The Committee further recommends that a process be developed which ensures effective implementation of all Government programs and policies which support green jobs and skill development throughout all sectors of the economy.</p> <p>The Government should also develop Australia's current and future skills base to ensure it has sufficient skills to take advantage of emerging employment opportunities driven through the CPRS and other complementary climate change policies.</p> <p>Recommendation 3</p> <p>The Committee recommends that the government develop policies complementary to the CPRS to encourage voluntary action.</p> <p>Recommendation 4</p> <p>The Committee recommends that the wording of section 14(5) of the CPRS Bill 2009 be amended so that in making</p>

	<p>recommendations on emissions caps the Minister "shall have regard" rather than "may have regard" to "voluntary action".</p> <p>Recommendation 5</p> <p>The Committee recommends that the Government continues to seek ways to assist the commercial scale development of renewable energy sources and sequestration technology as a priority.</p>
<p>Senate Finance and Public Administration: Inquiry into the National Greenhouse and Energy Amendment Bill 2009 (7 May 2009).</p> <p>http://www.aph.gov.au/senate/committee/fapa_ctte/national_greenhouse_energy_reporting/report/index.htm</p>	<p>Recommendation 1</p> <p>The committee recommends that the Senate pass the bill.</p>
<p>Senate Economics Legislation Committee: Inquiry into the Carbon Pollution Reduction Scheme Bill and related bills (15 June 2009).</p> <p>http://www.aph.gov.au/senate/committee/economics_ctte/cprs_2_09/report/index.htm</p>	<p>Recommendation 1</p> <p>The Committee recommends that the Senate pass the bills.</p>
<p>Senate Select Committee on Climate Policy (15 June 2009).</p> <p>http://www.aph.gov.au/Senate/committee/climate_ctte/report/index.htm</p>	<p>Recommendation 1</p> <p>The committee notes that the Treasury modelling was conducted in economic circumstances that were markedly different to those in which the legislation is proposed to now be introduced. Since the modelling was conducted the global financial crisis has led to a marked deterioration in the short-term economic outlook.</p> <p>Whilst the CPRS package has been revised on two occasions, the modelling continues to fail to take into account the impact of these changed economic circumstances. The committee considers the modelling undertaken by Treasury to be inadequate and recommends</p>

that the Government direct Treasury to undertake further modelling. The further modelling should: consider in detail the short-term adjustment costs; respond to criticisms made of Treasury's initial modelling including: taking into account the deterioration of the Australian economy the likely effect of the CPRS upon jobs and upon the environment the absence of any modelling of the impact of the CPRS on regional Australia; and model other types of schemes that have been proposed as alternatives to CPRS, including: a conventional baseline-and-credit scheme an intensity model a carbon tax a consumption-based carbon tax, and the McKibbin hybrid approach.

Recommendation 2

The committee recommends that the CPRS legislation not be passed in its current form.

Recommendation 3

The committee recommends any remodelled CPRS legislation clarify future arrangements to provide continued support for methane gas capture and energy generation following the foreshadowed cessation of state based schemes.

Recommendation 4

The committee recommends that the Government work with the NSW, ACT and Queensland governments to clarify, as a priority, transitional arrangements for power generation projects from waste methane which may be affected by the possible cessation of the NSW GGAS and similar programmes.

Recommendation 5

The committee recommends that the Government consider in detail different claims made about the probable expense of the expanded Renewable Energy Target. Analysis of the different cost estimates should be included in the Regulatory Impact Statement (RIS) accompanying the legislation to amend the Renewable Energy (Electricity) Act 2000.

Recommendation 6

The committee recommends that following the decision by COAG on 30 April 2009 to exempt major emitters, the Government should explain in the RIS accompanying the amendment bills: any differences in costs caused to householders and other industry sectors arising from the decision; the impact the exemptions will have on the efficiency and effectiveness of the scheme; and the form which compensation to householders will take.

Recommendation 7

The committee recommends the Government review the impact of the CPRS to avoid the EITE provisions generating perverse outcomes for the agriculture sector and the food processing and manufacturing sector such as scaling down and splitting operations.

Recommendation 8

The committee recommends that, as a priority, the Government develop complementary policy measures for greenhouse gas abatement and mitigation in the agricultural sector; and that such policy measures be underpinned by substantially greater research and development in this area.

Recommendation 9

The committee recommends that the Government establish an agriculture and land use policy taskforce to accelerate the development of complementary climate change policy measures for the land use sector; and to promote full carbon accounting in land use, agriculture and forestry sectors in international climate change fora.

Recommendation 10

The committee recommends that the Government promote the testing, development and roll-out of environmental restoration and land stewardship schemes, giving priority to schemes that can make a significant contribution to emissions reductions, agricultural productivity and biodiversity conservation.

Recommendation 11

The committee recommends that the Government promote the testing, development and roll-out of soil carbon

	<p>technologies and schemes, giving priority to schemes that can make a significant contribution to emissions reductions and soil health.</p> <p>Recommendation 12</p> <p>The committee recommends that the Government takes steps to ensure that Australia encourages reform of international carbon accounting rules.</p> <p>Recommendation 13</p> <p>The Committee recommends that the Government provide greater funding so that recommendations 8, 9, 10, 11 and 12 can be implemented in a timely manner.</p>
<p>Senate Economics Legislation Committee: Inquiry into the Renewable Energy (Electricity) Amendment Bill 2009 and a related bill (12 August 2009).</p> <p>http://www.aph.gov.au/senate/committee/economics_ctte/renewable_energy_09/report/index.htm</p>	<p>Recommendation 1</p> <p>The committee recommends that as part of the 2014 review of the RET, the Treasury projection of total electricity demand in 2020 is reviewed and if it is revised up, there be a corresponding increase in the RET to maintain the goal of 20 per cent of electricity being generated from renewable sources in 2020.</p> <p>Recommendation 2</p> <p>The Committee recommends that to underline the shortfall charge's role as a penalty rather than a price ceiling, it be reviewed after any year in which the maximum price for a renewable energy certificate exceeds 80 per cent of the shortfall charge.</p> <p>Recommendation 3</p> <p>The Committee recommends that the banking of renewable energy certificates be assessed as a part of the 2014 review.</p> <p>Recommendation 4</p> <p>The Committee recommends that the Senate pass the bills.</p>
<p>House Standing Committee on Climate Change, Water, Environment and the Arts: Inquiry into climate change and environmental impacts on</p>	<p>Recommendation 1</p> <p>The Committee recommends that the Australian Government commission a study on international coastal zone governance arrangements, policies and programs for addressing coastal climate change impacts, and adaptation</p>

coastal communities
“Managing our coastal
zone in a changing
climate: the time to act is
now” (26 October 2009).

<http://www.aph.gov.au/committee/ccwea/coastalzone/report.htm>

strategies. The completed study should be made public.

Recommendation 2

The Committee notes the importance of mitigation measures in addressing climate change impacts and accordingly recommends that the Australian Government continue to take urgent action to ensure that Australia can best contribute to a reduction in global greenhouse gas emissions.

Recommendation 3

The Committee recommends that the Australian Government increase its investment in coastal based climate change research on: sea level rise projections and the dynamics of polar ice sheets, particularly in the Antarctic extreme sea level events, including as a result of storm surge and tropical cyclones regional variations in sea level rise: ocean acidification, particularly impacts on Australia’s coral reefs, higher ocean temperatures and changing ocean currents.

Recommendation 4

The Committee recommends that the coastal zone component of the National Climate Change Science Framework and proposed National Climate Change Science strategy be clearly identified by the proposed high level coordination group and involve key coastal stakeholders.

Recommendation 5

The Committee recommends that the Department of Climate Change continue to fund research to: establish the wave climate around the coast so as to identify those locations most at risk from wave erosion; examine how the wave climate nationally interacts with varying landform types.

Recommendation 6

The Committee recommends that the Australian Government continue funding under the Climate Change Adaptation Skills for Professionals Program. In addition, the Australian Government should liaise with tertiary institutions to ensure an adequate supply of appropriately

skilled coastal planners and engineers.

Recommendation 7

The Committee recommends that the Australian Government: continue the Local Adaptation Pathways Program as a competitive funding program; review the program's guidelines to secure better outcomes by:

⇒ use of consistent methodology for vulnerability assessments

⇒ evaluation of the outcomes of the projects that are undertaken with the grants

⇒ encouraging regional applications from local councils whenever possible.

Recommendation 8

The Committee recommends that the Department of Climate Change share all data collected through vulnerability assessments undertaken as part of the Australian Government Local Adaptation Pathways Program on the proposed National Coastal Zone Database (see also recommendation 42).

Recommendation 9

The Committee recommends that the Australian Government establish a coastal zone research network within the National Climate Change Adaptation Research Facility and that it complete a coastal zone research plan.

Recommendation 10

The Committee recommends that: the Department of Infrastructure, Transport, Regional Development and Local Government undertake a study into the human and resourcing needs of local governments to effectively plan for and adapt to the impacts of climate change; this study be carried out in conjunction with the Australian Local Government Association and the National Sea Change Taskforce

Recommendation 11

The Committee recommends that the Australian Government establish a National Coastal Zone Database to

improve access to and consistency of information relevant to coastal zone adaptation. The National Coastal Zone Database should be an online portal that allows ready access to: 'first pass' National Coastal Vulnerability Assessment data; state and local Digital Elevation Modelling; National Climate Change Adaptation Research Facility reports; federal Local Adaptation Pathways Program reports; state and local coastal vulnerability assessment results.

Recommendation 12

The Committee recommends that, following the completion of the 'first pass' National Coastal Vulnerability Assessment, the Australian Government consider the resourcing and financing of second and third pass assessments, in conjunction with state, territory and local government authorities.

Recommendation 13

The Committee recommends that the Australian Government take urgent action to protect Australians from the threats of dengue fever and chikungunya virus. The knowledge gaps identified by the National Climate Change Adaptation Research Facility research plan with regards to the relationship between climate variation and vector-borne disease should be urgently addressed. The Australian Government should: undertake research into the relationship between climate change and vector-borne disease; produce modelling to allow for advanced early warning of impending threats from vector-borne disease; continue to work towards producing a structured national framework for dealing with mosquito outbreaks in Australia; increase biosecurity measures to better protect against chikungunya virus entering Australia.

Recommendation 14

To further enhance Australia's disaster mitigation, preparedness, response and recovery arrangements in the event of possible major coastal disasters, the Committee recommends that the Australian Government establish a grants program, the Coastal Natural Disaster Mitigation Program, to fund natural disaster mitigation projects in the Australian coastal zone.

The Committee also recommends that the Australian

Emergency Management Committee (AEMC) consider the following issues: improved data on coastal disaster risk assessment and vulnerable coastal sites; improved access and evacuation routes for coastal communities; improved coastal community awareness of and resilience to natural disasters; improved coordination of coastal disaster mitigation arrangements with other initiatives currently underway, such as reviews of the Australian Building Code and land use planning policies to take into account climate change impacts; improved early warning systems for coastal areas in the event of an extreme sea level event (storm surge, erosion, flooding).

The Committee further recommends that the AEMC provide a report on these matters to the Ministerial Council for Police and Emergency Management.

Recommendation 15

The Committee recommends that the Australian Government, through the Ministerial Council for Police and Emergency Management, recognise the extensive Surf Life Saving Australia network and take appropriate steps to integrate this network into emergency services preparedness, planning, and response systems and activities.

Recommendation 16

The Committee notes that major initiatives relating to climate change adaptation risk assessment and infrastructure are currently in progress. Given that much of Australia's infrastructure is in the coastal zone and the particular threats facing the coastal zone from climate change, involving significant socioeconomic costs, the Committee recommends that the Australian Government ensure there is a comprehensive national assessment of coastal infrastructure vulnerability to inundation from sea level rise and extreme sea level events.

Recommendation 17

The Committee recommends that the Department of Climate Change, in collaboration with the Queensland Government, CSIRO and Indigenous communities in the Torres Strait, undertake a major study into the vulnerability of the Torres Strait to the impacts of climate change and provide assistance in the development of an

	<p>adaptation plan.</p> <p>Recommendation 18</p> <p>The Committee recommends that the Australian Government give the five recommendations calling for information, studies and data, as proposed by the Torres Strait Regional Authority, early and urgent consideration with a view to their implementation.</p> <p>Recommendation 19</p> <p>The Committee recommends that the Australian Government request the Productivity Commission to undertake an inquiry into the projected impacts of climate change and related insurance matters, with a particular focus on: insurance coverage of coastal properties, given the concentration of Australia's population and infrastructure along the coast; estimates of the value of properties potentially exposed to this risk; insurance affordability, availability and uptake; existing and emerging gaps in insurance coverage, with a particular focus on coverage of coastal risks such as storm surge/inundation, landslip/erosion and sea level rise (including the combined effects of sea inundation and riverine flooding); the need for a clear definition of the circumstances under which an insurance claim is payable due to storm surge/inundation, landslip/erosion and sea level rise, as well as due to permanent submersion of some or all of the land; the possibility of a government instrument that prohibits continued occupation of the land or future building development on the property due to sea hazard; gaps in the information needed to properly assess insurance risk and availability of nationally consistent data on climate change risks; examining the key actions for governments proposed by the Insurance Council of Australia and the Insurance Australia Group in their submissions to this inquiry; possible responses to a withdrawal of insurance for certain risks or regions, noting the increased burden this could place on government and taxpayers.</p> <p>Recommendation 20</p> <p>The Committee notes the Council of Australian Governments initiative (through the Local Government and Planning Ministers Council) to develop state-specific</p>
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climate change planning policies by mid 2011, to inform local governments and regional planning responses to climate change. The Committee recommends that the Australian Government ensure that the outcomes of this initiative are included as part of the action plan under the proposed new Intergovernmental Agreement on the Coastal Zone.

Recommendation 21

The Committee recommends that the Australian Government consider the benefits of adopting a nationally consistent sea level rise planning benchmark and, if so, whether this be done on a statutory basis or otherwise. The outcomes of this consideration should then be included as part of the action plan for the proposed Intergovernmental Agreement on the Coastal Zone.

Recommendation 22

The Committee recommends that the Building Code of Australia, including cyclone building codes, be revised with the objective of increasing resilience to climate change.

Recommendation 23

Noting the gap in research on legal issues and climate change impacts on the coastal zone, the Committee recommends that the Australian Government request that the Australian Law Reform Commission undertake an urgent inquiry into this area, with particular focus on: clarification of liability issues with regard to public authorities acting or not acting in terms of climate change adaptation and possible coastal hazards (e.g. legal basis to implement adaptation strategies of protect, redesign, rebuild, elevate, relocate and retreat); clarification of liability issues with regard to private property holders acting to protect their properties from the impacts of climate change; legal issues associated with the impacts of climate change on existing developments, as opposed to planned new developments; mechanisms to ensure mandatory risk disclosure to the public about climate change risks and coastal hazards (e.g. legislation harmonised across all states requiring mandatory disclosure of all known and predicted risk data by state and local governments to property purchasers during

property conveyance and title search processes); whether there should be broader indemnification of local government authorities.

Recommendation 24

The Committee recommends that the Australian Government, through the Council of Australian Governments process, examine the establishment of a system of national coastal zone environmental accounts, employing the model developed by the South East Queensland Healthy Waterways Partnership.

Recommendation 25

The Committee recommends that the Australian Government, through the Australian Bureau of Statistics, ensure that: accurate and consistent methods of measuring the numbers and the impact of tourists and other non-residents in coastal areas are undertaken to enable resources to be better matched with demand for infrastructure and services; improved data on long-term demographic trends in coastal areas is made available to assist in coastal zone planning and management.

Recommendation 26

The Committee recommends that the Australian Government: expand the list of national priority areas identified under the Caring for our Country program to include climate change impacts on biodiversity; give consideration in future funding rounds to projects that:

⇒ involve working with state/territory and local governments to improve coastal land use planning

⇒ seek to address loss of coastal habitat as a result of coastal development and population pressures.

Recommendation 27

The Committee recommends that, in seeking to expand the area protected within Australia's National Reserve System (NRS) under the Caring for our Country program, the Australian Government focus on high biodiversity coastal habitat, including more effective off-reserve coastal zone conservation and expanded coastal reserves that provide larger buffer zones. In undertaking this initiative, the

Australian Government should continue to work with state/territory and local governments, Indigenous groups, conservation organisations, private landholders and other stakeholders to ensure that these protected areas are added to the NRS in a timely manner.

Recommendation 28

The Committee recommends that the Australian Government, in considering its response to the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), take into account concerns about the EPBC Act and coastal zone management raised as part of this inquiry—in particular, the need to address the cumulative impacts of coastal development. This could be achieved by numerous means, including: a land clearing trigger; defining coastal ecosystems as a matter of national environmental significance; making more use of landscape-scale assessments through strategic assessments or bioregional plans.

Recommendation 29

The Committee recommends that the Australian Government: continue working with the Queensland Government and local councils under the existing Great Barrier Reef Intergovernmental Agreement to improve land use planning in the catchment; commission analysis of the Great Barrier Reef as a case study for integrated coastal zone management (ICZM) in Australia. The study should draw out possible directions for ICZM in Australia with regard to:

⇒ addressing challenges associated with climate change impacts on biodiversity

⇒ declining water quality from catchment runoff and loss of coastal habitat from coastal development and population pressures

⇒ building cooperative partnerships between Commonwealth, state and local government, and other stakeholders

⇒ establishing governance and institutional frameworks

Recommendation 30

The Committee recommends that the Australian Government urgently commission a detailed climate change vulnerability assessment for Kakadu National Park, in consultation with the park's traditional owners and other stakeholders and drawing on the results of the 'first pass' National Coastal Vulnerability Assessment of the park. This assessment should specifically focus on the vulnerability of Kakadu's freshwater wetland systems to saltwater intrusion. A key outcome of the assessment should be the development of a Climate Change Action Plan for Kakadu National Park, with coordinated input from the Australian Government and Northern Territory Government, Indigenous land owners, researchers and other stakeholders.

Recommendation 31

The Committee recommends that the Australian Government: require that all Ramsar listed wetlands have effective and operational management plans and that resources are allocated by governments to monitor the implementation of these plans; increase the number of coastal wetlands classified as Ramsar sites, particularly those classified as Nationally Important wetlands; work with state and territory governments through the Natural Resource Management Ministerial Council, and in consultation with other stakeholders, to improve the management and monitoring of coastal wetlands, particularly Ramsar sites located in close proximity to development; improve public awareness about what actions impacting on a Ramsar wetland should be referred to the Minister under the Environment Protection and Biodiversity Conservation Act 1999; ensure that the National Guidelines for Ramsar Wetlands also include modules on the process for nominating Ramsar wetlands; develop a climate change action plan for coastal Ramsar wetlands and Nationally Important wetlands.

Recommendation 32

The Committee recommends that the Australian Government: work through the Natural Resource Management Ministerial Council and in consultation with Birds Australia and other stakeholders to implement a National Shorebirds Protection Strategy. The strategy

should focus on tightening restrictions on beach driving and access to bird breeding habitat, preserving habitat, identifying suitable buffer zones for migration of coastal bird habitat, managing pest animals and increased public education; provide further funding to Birds Australia and other research groups to ensure continued monitoring and data collection with regard to migratory and resident shorebirds; provide funding to strengthen partnerships between domestic and international shorebird conservation groups to increase awareness and conservation efforts in other countries; commission a detailed climate change impact study on Australia's migratory and resident shorebirds; in its consideration of amendments to the Environment Protection and Biodiversity Conservation Act 1999 following the independent review, give consideration to the formal listing of coastal shorebird and sea bird communities as threatened species/ecological communities under the act.

Recommendation 33

The Committee recommends that the Australian Government: work with the Natural Resource Management Ministerial Council and other stakeholders to develop an action plan to:

⇒ ensure that coastal buffers, coastal habitat corridors and high ecological value areas are identified and included in Commonwealth, state and local government management processes

⇒ ensure appropriate infrastructure planning and that land is made available to allow for the migration of coastal ecosystems

⇒ promote cooperative ecosystem-based planning and management approaches across jurisdictions

⇒ implement a nationally consistent coastal and marine biodiversity monitoring and reporting framework

⇒ develop a targeted strategy to address key gaps in knowledge of coastal and marine biodiversity and improve access and sharing of knowledge and data

⇒ develop regional climate change adaptation policies and plans and integrate them into coastal and marine

	<p>bioregional planning processes</p> <p>⇒ ensure that all future national coastal zone policy incorporates these priorities, as well as future revised national sustainability, biodiversity, climate change and environmental policy frameworks.</p> <p>Recommendation 34</p> <p>The Committee recommends that coastal based Natural Resource Management bodies seeking funding under the Caring for our Country program have coastal and marine priorities, as well as coastal zone management principles integrated in their management plans.</p> <p>Recommendation 35</p> <p>The Committee recommends that the Australian Government, in consultation with Indigenous Australians and other coastal stakeholders, commission work to provide a national repository identifying Indigenous and non-Indigenous cultural heritage sites in vulnerable coastal areas.</p> <p>Recommendation 36</p> <p>The Committee recommends that the Australian Government urgently commission further research on socioeconomic vulnerability to climate change impacts, particularly in coastal communities.</p> <p>Recommendation 37</p> <p>The Committee recommends that the Australian Government: consider the Victorian Government’s model of a sustainable coastal community as part of the proposed Intergovernmental Agreement on the Coastal Zone to be concluded through the Council of Australian Governments; ensure an early response to the recommendations provided in the Sustainability for Survival: Creating a Climate for Change—Inquiry into a Sustainability Charter report and the Sustainable Cities report.</p> <p>Recommendation 38</p> <p>The Committee recommends that the Australian</p>
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Government request that the Centre for Excellence for Local Government ensure a particular focus on capacity building for coastal local councils. Capacity building should focus on addressing issues relating to: population growth pressure; planning and design of new infrastructure; integrated coastal zone management; climate change impacts and adaptation.

Recommendation 39

The Committee recommends that the Australian Government give consideration to establishing a separate funding program for infrastructure enhancement in coastal areas vulnerable to climate change. Such funding should be provided according to a formula requiring contributions, either financial or in-kind, from state governments and relevant local government authorities.

Recommendation 40

The Committee recommends that the Australian Government undertake an awareness campaign to alert coastal communities to the key challenges facing the coastal zone and the value of community engagement in addressing these challenges. The campaign should aim to build understanding and awareness of coastal management issues to encourage the continued membership and support of volunteer networks in the coastal zone.

Recommendation 41

The Committee recommends that the Australian Government nominate 2012 as the Year of the Coast, to further build community awareness about the issues facing the coastal zone. The Australian Government should work with coastal stakeholders, volunteer groups and the general community in determining key activities as part of this initiative.

Recommendation 42

The Committee recommends that the National Coastal Zone Database be expanded over time to include information on environmental data and management and planning information relevant to the coastal zone.

Recommendation 43

The Committee recommends that the Australian Government provide funding support for the ongoing activities of the Australian Coastal Alliance in providing a national information and communication interface between research organisations and local government authorities and other coastal stakeholders.

Recommendation 44

The Committee recommends that the Australian Government, in cooperation with state, territory and local governments, and in consultation with coastal stakeholders, develop an Intergovernmental Agreement on the Coastal Zone to be endorsed by the Council of Australian Governments. The intergovernmental agreement should: define the roles and responsibilities of the three tiers of government—federal, state and local—involved in coastal zone management; include a formal mechanism for community consultation; incorporate principles based on strategic regional coastal planning and landscape scale/ecosystem based coastal zone management; include an effective implementation plan with resources allocated to ensure that objectives are realised; be overseen by a new Coastal Zone Ministerial Council; be made public.

Recommendation 45

The Committee recommends that the Australian Government: ensure that the Intergovernmental Agreement on the Coastal Zone forms the basis for a National Coastal Zone Policy and Strategy, which should set out the principles, objectives and actions that must be undertaken to address the challenges of integrated coastal zone management for Australia; establish a broad based National Catchment-Coast-Marine Management program to provide funding for initiatives relating to:

⇒ sustainable coastal communities

⇒ climate change and biodiversity

⇒ implementation of projects to progress integrated coastal zone management;

establish a National Coastal Zone Management Unit within the Department of Environment, Water, Heritage

	<p>and the Arts to support the implementation of these national initiatives; develop a Coastal Sustainability Charter based on the Victorian Government model.</p> <p>Recommendation 46</p> <p>The Committee recommends that the Australian Government establish a National Coastal Advisory Council to: provide independent advice to government; advise the new coastal unit within the Department of the Environment, Water, Heritage and the Arts; ensure community input into national coastal zone policy, planning and management.</p> <p>Recommendation 47</p> <p>The Committee recommends that proposals for a National Oceans and Coast Act and a statutory Coastal Council be the subject of ongoing consideration once the Intergovernmental Coastal Zone Agreement is determined.</p>
<p>Senate Education, Employment and Workplace relations Committee: Inquiry into the Effects of Climate Change on Training and Employment Needs (discharged 23 November 2009).</p> <p>http://www.apf.gov.au/Senate/committee/eet_ctte/employ_climate/report/index.htm</p>	<p>Recommendation</p> <p>1.5 The committee recommends that this inquiry not be proceeded with and be discharged from the notice paper.</p>
<p>House Standing Committee on Primary Industries and Resources: Inquiry into the role of government in assisting Australian farmers to adapt to the impacts of climate change (15 March 2010).</p> <p>http://www.apf.gov.au/house/committee/pir/australianfarmers/report.htm</p>	<p>Making Decisions On-farm</p> <p>Recommendation 1</p> <p>The Committee recommends that the Australian Government support rural counselling and support groups, such as Rural Alive and Well, and place funding for such groups on a permanent and regular basis.</p> <p>Recommendation 2</p> <p>The Committee recommends that the Australian Government, as part of its overall response to issues affecting agriculture and climate change, take more</p>

effective account of the needs and decision making processes of farmers and ensure that the delivery of adaptation programs is flexible and responsive to the needs of farmers and rural communities.

Recommendation 3

The Committee recommends that the Australian Government, as part of its overall response to issues affecting agriculture and climate change, invest research funding in the following high priority areas: Soil carbon sequestration; Soil stabilisation and pasture improvements using methods such as perennial pastures, pasture cropping, rotational grazing, biodynamic farming, minimum/no till cultivation and controlled traffic farming; Soil water retention strategies and water use efficiency; Landscape planning and natural resource management; and Risk management.

Recommendation 4

The Committee recommends that the Australian Government, in conjunction with State and Territory Governments, establish a national Continuously Operating Reference Station network across Australia and regulate for signal compatibility between different GPS systems.

Recommendation 5

The Committee recommends that the Australian Government support further research efforts into the mitigation of greenhouse gas emissions from agriculture.

Recommendation 6

The Committee recommends that the Australian Government, as part of its overall response to issues affecting agriculture and climate change, increase its investment and support for research into energy efficiency in the agriculture sector and the development of alternative energy and alternative fuels on-farm, particularly in regard to: Biofuels; Biomass from agricultural waste; and Biochar.

Recommendation 7

The Committee recommends that the Australian Government increase funding for research into improving

the consistency and accuracy of weather and climate forecasting, especially at a seasonal and regional level.

Recommendation 8

The Committee recommends that the Australian Government develop an education and training scheme for farmers in the understanding and use of weather and climate information.

Recommendation 9

The Committee recommends that the Australian Government maintain its commitment to climate change research pertaining to Australia's agricultural industries, ensuring that the funding is committed, sustained and pays due attention to regional as well as national needs and priorities. Climate change research must reflect the changes affecting different regions, soils and topography—as all have an impact on changes in farming practices to deal with them.

Recommendation 10

The Committee recommends that the Australian Government, as part of its ongoing strategy development to issues affecting agriculture and climate change, develop a strategy to capture, evaluate and disseminate the range of farmer driven innovations that have a significant capacity to increase the resilience and productivity of farm enterprises.

Recommendation 11

The Committee recommends that the Australian Government ensures that there is an overall body to receive and analyse research and co-ordinate research across the nation in relation to climate change adaptation in agriculture, and that said body is given the necessary resources of staff and funds to carry out its role.

Recommendation 12

The Committee recommends that the Australian Government give greater consideration to better integration of local and regional organisations into its overall response to the issues affecting agriculture and climate change, and provide additional funding to support

	<p>the management role of these local and regional organisations.</p> <p>Recommendation 13</p> <p>The Committee recommends that the Australian Government give further consideration to the analysis of government policy and outcomes in the submission to the current inquiry made by the Future Farm Industries CRC, with a view to ensuring the better coordination of research and extension efforts and the delivery of effective policy outcomes.</p> <p>Recommendation 14</p> <p>The Committee recommends that the Australian Government, as part of its overall response to issues affecting agriculture and climate change, explore further opportunities to facilitate adaptation to climate variability and climate change through the use of targeted, industry and issue specific, incentives.</p> <p>Recommendation 15</p> <p>The Committee recommends that the Australian Government place funding for local and community organisations engaged in the work of supporting farmers in adapting to climate variability and climate change upon a permanent and regular basis.</p>
<p>Senate Economics Legislation Committee: Inquiry into the Safe Climate (Energy Efficient Non-Residential Buildings Scheme) Bill 2009 (17 March 2010).</p> <p>http://www.aph.gov.au/senate/committee/economics_ctte/energy_efficient_buildings_09/report/index.htm</p>	<p>Recommendation 1</p> <p>The committee recommends that through its mandatory disclosure initiative, the federal government collect and analyse data to identify those factors that correlate with the emissions intensity of non-residential buildings. This information should be collated by location and made publicly available.</p> <p>Recommendation 2</p> <p>The committee notes the CPRS legislation and recommends that in preparation for the full implementation of the scheme, steps be undertaken to analyse the data referred to in recommendation 1 and formulate an appropriate scheme to enforce energy efficiency for commercial buildings.</p>

<p>Senate Finance and Public Administration Committee: Native Vegetation Laws, Greenhouse Gas Abatement and Climate Change Measures (30 April 2010).</p> <p>http://www.aph.gov.au/senate/committee/fapa_ctte/climate_change/report/index.htm</p>	<p>Recommendation 1</p> <p>The committee recommends that COAG re-examine the native vegetation legislation and its 2006 recommendations with a view to establishing a balance between maximising agricultural production and best practice conservation.</p> <p>Recommendation 2</p> <p>The committee recommends that the Commonwealth initiate, through the Natural Resource Management Ministerial Council, a national review to assess</p> <p>the impact of various native vegetation legislative and regulatory regimes, particularly those at the state level. In undertaking such a review, the following issues should be specifically addressed: the liability of landholders complying with native vegetation laws for the payment of rates or taxes for land that is not available for productive use; the right of landholders to manage competing environmental objectives over land where restrictions have been imposed, for example the management of noxious weeds and pests in protected native vegetation areas; the institution of inexpensive, accessible, timely and independent administrative appeals processes against decisions of enforcement agencies or officials regarding the granting of permits or institution of regulatory regimes over private land; the application of state-wide regulations where there are distinct and notable variations in both the environmental conditions and objectives across regions within states; the burden of these laws on newer farming areas and communities as opposed to more established ones; and, the imposition of caveats by state authorities which prevent or restrict the</p> <p>existing use of land when converting title from leasehold to freehold.</p> <p>Recommendation 3</p> <p>The committee recommends a review of best practice in relation to stewardship initiatives across the country with a view to re-orienting future regulatory activities.</p>
<p>Senate Environment and Communications Legislation Committee:</p>	<p>Recommendation 1</p>

Carbon Credits (Carbon Farming Initiative) Bill 2011, Carbon Credits (Consequential Amendments) Bill 2011 and the Australian National Registry of Emissions Units Bill 2011 (27 May 2011).

http://www.aph.gov.au/committee/ec_ctte/carbon_farming/report/index.htm

The committee recommends the government consider options to ensure there are no perverse incentives to cease existing abatement projects, and encourage first movers to undertake further abatement or sequestration activities under the Carbon Farming Initiative.

Recommendation 2

The committee recommends the government consider what more can be done to fast track development of methodologies, and to develop and test the workability of carbon offsets projects in key agricultural industries.

Recommendation 3

The committee recommends the government continue to monitor scientific research relevant to the issue of permanence and adjust permanence obligations in the CFI to reflect international consensus on this matter.

Recommendation 4

The committee recommends that in developing the negative list the government takes care to preserve abatement incentives, for example by tightly defining excluded projects to reflect local environmental conditions or circumstances.

Recommendation 5

The committee recommends the government consider options for improving the capacity of natural resource management plans to take account of climate change mitigations options and adaptation needs, and to maximise the broader environmental and social benefits of the Carbon Farming Initiative.

Recommendation 6

The committee recommends the government consider further changes to regional natural resource management plans to improve their governance and consistency, such as by requiring each plan to: be managed by a statutory authority; address the same basic criteria, at a minimum; and be enforced to the same standard.

Recommendation 7

	<p>The committee recommends the government address obstacles to indigenous participation in the CFI, including resolving outstanding uncertainties in relation to participation by holders of non-exclusive native title.</p> <p>Recommendation 8</p> <p>The committee recommends the government make clear that Kyoto-compliant credits will be linked to any future carbon price mechanism.</p> <p>Recommendation 9</p> <p>The committee recommends that, subject to the recommendations contained elsewhere in this report, the Senate pass the Carbon Credits (Carbon Farming Initiative) Bill 2011; the Carbon Credits (Consequential Amendments) Bill 2011; and the Australian National Registry of Emissions Units Bill 2011.</p>
<p>House of Representatives Standing Committee on Climate Change, Environment and the Arts: Advisory Report on Bills Referred 24 March 2011 [CFI Bills] (23 May 2011).</p> <p>http://www.aph.gov.au/house/committee/ccea/24March2011/report.htm</p>	<p>Recommendation 1</p> <p>The Committee recommends that the House of Representatives pass the Carbon Credits (Carbon Farming Initiative) Bill 2011.</p> <p>Recommendation 2</p> <p>The Committee recommends that the House of Representatives pass the Carbon Credits (Consequential Amendments) Bill 2011.</p> <p>Recommendation 3</p> <p>The Committee recommends that the House of Representatives pass the Australian National Registry of Emissions Units Bill 2011.</p>
<p>House Standing Committee on Climate Change, Environment and the Arts Inquiry into Australia's biodiversity in a changing climate (ongoing).</p> <p>http://www.aph.gov.au/house/committee/ccea/cbio/index.htm</p>	<p>Report not yet tabled.</p>

Senate Select Committee on Scrutiny of New Taxes Inquiry into Carbon Tax Pricing Mechanisms (ongoing).

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

Interim report 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.
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Dissenting Report by Senator John Madigan

I strongly object to the introduction of any carbon tax or carbon trade scheme.

1.1 The passing of this bill will only further damage already struggling rural and regional Australian communities.

The loss of jobs in manufacturing in these areas because of this bill will further fuel the very real feelings of desperation, despair and hopelessness felt in these communities.

1.2 While the bill has been debated rigorously between parties in the chamber, the needs of Australian workers, families and communities have been forgotten.

This has sent a clear message that region and rural communities, livelihoods and families in this country are simply not important.

1.3 The devastating effects on rural and regional communities by this tax has simply not been taken into account.

Recent visits to the Latrobe Valley, Mackay, Geelong and Tamworth have given me a first-hand look at what the passing of this bill would do to communities.

Once the major energy producer for the state of Victoria and an absolute industry powerhouse, the Latrobe Valley was first destroyed by privatisation and will receive the final blow by this carbon tax.

Thousands of jobs will be lost in the already struggling communities.

The St Vincent de Paul branch in the town of Moe in the Latrobe Valley has given out more than \$17,000 worth of food vouchers in the past three months.

This figure does not include assistance given for utility bills. The organisation expects this number to rise. This is simply one indication of one assistance group in one town.

Thousands of jobs will be lost in the already struggling communities.

Similar scenes are playing out right now across the country.

1.4 Communities have an air of desperation about them. Shops are closing and small businesses are leaving. Along with them leave the opportunities for apprenticeships and jobs. Families are deserting the communities. The towns have experienced rises in unemployment and suicide rates.

All Australian's have the right to paid employment. To be able to earn a wage, support a family, a community and have self respect.

This bill is ignoring the rights of Australians around the country and is simply killing communities.

Over 75 per cent of the nation has spoken out against this tax. I cannot support a tax so strongly opposed to by the Australian public.

Senator John Madigan
Democratic Labor Party Senator for Victoria

Additional Comments by Senator Nick Xenophon

As previously stated, I support action on climate change, however it is crucial that the scheme is credibly internationally and sustainable domestically.

I have long advocated for an intensity-based scheme, as proposed by leading economic consultancy, Frontier Economics, whereby emitters are penalised for emissions above a set baseline and rewarded if their emissions intensity is below that baseline.

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.

It will also enable a higher emissions reduction target – it is cheaper and greener than the Government's Clean Energy plan.

In addition to the concerns raised to the Interim Report, I am also concerned that, under the current legislative proposal and based on existing modelling that has been provided by Treasury, taxpayers may face a multi-billion dollar shortfall.

Treasury assumes a price per carbon unit of AU\$29 in 2015, however Bloomberg analysts assumes a price per carbon unit of AU\$16.

As compensation to households under the Government's proposal is in the form of lump sum compensation, which will not change in line with the carbon price, the concern is that carbon revenue will fall to about half of what is predicted if Bloomberg's forecast is correct.

This means that households would, in effect, be over-compensated and the Govt will see a significant deficit in revenue.

For example, revenue from sale of permits in 2014/15 is expected to be \$8.6 billion.

If the price in 2015/16 is \$16, as predicted by Bloomberg, not \$29 per carbon unit, then this revenue will fall to approximately \$4.7 billion.

Under the intensity-based model proposed by Frontier Economics, this would not be an issue as compensation to households would fall with the carbon price.

This proposition was put to Treasury during the recent 2011 Supplementary Estimates.

Senator XENOPHON: Bloomberg New Energy Finance, with 200 analysts around the world, say that the price of carbon is going to be \$16 a tonne in 2015. The Treasury modelling says \$29 a tonne in 2015. If the price in 2015 is \$16, not \$29, the revenue will go from \$8.6 billion to \$4.7 billion. There will be a revenue shortfall of almost \$4 billion. If Bloomberg is right, there will be a significant revenue shortfall, won't there?

Dr Parkinson: If the carbon price is dramatically different from what is assumed, and people purchase the permits from overseas, there will be an impact on the revenue collection.

Senator XENOPHON: Are you concerned that Bloomberg New Energy Finance—which is, I think, a reputable financial analyst with 200 analysts around the world that look at this specific issue—is making an assumption—

Dr Parkinson: But are they talking about the European permit price or CDM prices?

Senator XENOPHON: In terms of Bloomberg's analysis they are talking, I think, not just about Europe but about the global carbon prices.

Dr Parkinson: But it depends on what can actually be brought into the Australian market.

Senator XENOPHON: Sure, but if the global price is reduced—

Dr Parkinson: But there is not a single global price. So if what they are saying is that the European price is lower and we do not accept European permits then it does not matter, in a sense. The international price that is relevant is the price of the permits that are allowed into the Australian system. Senator, when you calculate your number, are you talking about just the household compensation or about the value of the free permits as well? The value of the free permits moves automatically with whatever the price is.

Senator XENOPHON: My understanding—and I will be corrected if I am wrong—is that there was anticipated revenue of \$8.6 billion in 2015-16.

Dr Parkinson: That is net of free permits?

Senator XENOPHON: That is my understanding.

Senator Wong: That is in the bill. You will see the fiscal tables.

Dr Parkinson: Yes, that is right. So that is the revenue from the sale of the permits themselves. So obviously if there is less revenue from the sale of the permits and all of the outlays remain unchanged then there will be a fiscal impact.

Ms McCulloch: There are elements of the package that will move with the price, so you cannot just do a straight calculation of what the impact would be from a change in price just by looking at the simple table. For example, some of the free permit or EITEIs assistance would move depending on what the price was. So the amount of compensation that you provide to industry would be linked to those changes. The other point that you need to bear in mind is that, if the prices are different, you may have different

emissions trajectories, which would also affect the volume of revenue or the value of the revenue.

Senator XENOPHON: I guess, Dr Parkinson, that the concern in my question is that Bloomberg undertook this relatively recent analysis, saying that they think that the carbon price will be much less than what has been forecast in Treasury assumptions.

...

Senator XENOPHON: But is there not an issue there that there is a potential downside that, given that compensation for households is relatively fixed—the compensation for households is relatively fixed, is it not—

Dr Parkinson: That is correct.

Senator XENOPHON: So that is one part of the package that is relatively inflexible.

Dr Parkinson: Yes.

Senator XENOPHON: I understand the policy rationale, but that could cause a fiscal hole if the carbon price is less.

Dr Parkinson: And that is why I said that if everything else is constant you are correct. The bits that are constant are around the household assistance. But, as Ms McCulloch said, it is not then just a case where if the permit price is 10 per cent lower then it flows through automatically, because the value of the—

Senator Wong: Because other bits move.

Dr Parkinson: Because other bits will move.

Senator XENOPHON: Yes.

Dr Parkinson: But you are right: the household compensation component is—

Senator XENOPHON: That is relatively fixed; that is less flexible.

Dr Parkinson: That is right. Hence, if the cost of permits is lower, the extent to which households are compensated or overcompensated becomes larger.

Senator XENOPHON: That is right.

Dr Parkinson: It is akin to a tax cut or a payment to households.

Senator XENOPHON: If Bloomberg is right on that assumption, there is a significant potential fiscal downside.

Dr Parkinson: There has always been that in the same way that, if permit prices were higher, there was always a sense that you might find there would be more revenue, but you would need to think about returning that to households or what you were going to do in terms of compensation.

...

Senator XENOPHON: Yes, I appreciate that. Minister, let us suppose that in 2015 the carbon price is much lower than has been forecast and the biggest fiscal risk is that the amount of compensation for households is fixed. But, if the carbon price is lower, the price impacts will be lower. Does that mean that the compensation package could also be lower in order to reduce the fiscal risk? In other words, if the carbon—

Senator Wong: That has been quite clearly ruled out by the Prime Minister.

Senator XENOPHON: So, even if the carbon price collapses, people will still get the same—

Senator Wong: The assistance is permanent.

Dr Parkinson: The compensation that comes into effect starting in May next year is permanent.

Senator Wong: It should be recalled too—and I think this was referenced earlier—that the assistance package has a range of public policy objectives. You recall that one of the significant benefits in the package is the increase in the tax-free threshold. There are obviously participation benefits associated with that as well. We have combined the carbon price assistance package with a package in terms of the tax and transfer system which is designed to encourage participation and is consistent with the direction of the Henry review.¹

This exchange strengthens the arguments for the Frontier Economics approach, which involves less revenue churn and significantly less price effects on the electricity sector, while achieving greater environmental benefits.

Finally, I reiterate my position that any proposal for a price on carbon should not be implemented until a Federal Election has been called and a mandate obtained for the introduction of such a policy.

Senator Nick Xenophon
Independent Senator for South Australia

¹ Supplementary Estimates – Economics Committee, Thursday 20 October 2011, Page 41

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

- 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
 - 37 Additional Information Received: Letter to the Committee dated 14 October 2011, from Dr David Gruen, Executive Director of the Macroeconomic Group – Domestic, Department of the Treasury, received on 14 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

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- 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
 - 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
 - 34 Answer from the Department of the Treasury to a Question on Notice (question 2) taken at a public hearing in Canberra on 23 September 2011, received on 13 October 2011
 - 35 Answer from the Department of the Treasury to a Question on Notice (question 6) taken at a public hearing in Canberra on 23 September 2011, received on 19 October 2011
 - 36 Revised answer from the Department of Climate Change and Energy Efficiency to a Question on Notice (question 7) taken at a public hearing in Canberra on 16 September 2011, received on 24 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