

Chapter 5

The energy sector under the carbon tax

Introduction

5.1 This chapter provides an overview of the energy sector in Australia, its role in the Australian economy, and importance to employment. The role of power stations in regional employment is of particular concern in regard to the introduction of the carbon tax and the proposed closure of brown coal-fired generators.

5.2 The effect of the government package on the energy sector will also be a focus of this chapter. In general terms the government package will lead to an increase in energy prices for which it will attempt to compensate some households. It will provide compensation and assistance measures to certain generators.

5.3 However, it will not adequately compensate regional areas and communities for the effects of unemployment created by the closure of power stations and cut backs to energy generation and coal mining in certain areas, as distinct from the coal export industry. Nor, according to evidence put before the inquiry, will it compensate all power companies for its effects equally.

5.4 The government believes its package will change the energy sector in Australia in quite fundamental and lasting ways. Apart from the closure of at least two brown coal-fired power stations (to be discussed below), the Prime Minister, the Hon. Julia Gillard MP, has asserted that:

The carbon price will change Australia's electricity generation by encouraging investment in renewable energy like wind and solar power, and the use of cleaner fuels like natural gas.¹

5.5 These comments understate the significant challenges faced by Australia's electricity generation sector in the short and medium term as it deals with the implications of the carbon tax. They ignore the impact the carbon tax will have on electricity prices and potentially on energy security.

The energy sector in Australia

5.6 Australia is the ninth largest energy producer in the world, and accounts for around 2.4 per cent of world energy production. Around 68 per cent of domestic energy production in 2008-09 was exported, with the remaining amount going towards domestic consumption.²

1 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, Foreword, p. v.

2 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

5.7 The Australian energy sector has been reliant upon the main Australian produced fuels, which in 2008-09 included:

- coal, which accounted for 54 per cent of total Australian energy production ;
- uranium, which accounted for 27 per cent;
- natural gas, which represented 11 per cent;
- crude oil and liquefied petroleum gas (LPG), accounting for 6 per cent; and
- renewable energy sources, which accounted for 2 per cent.³

5.8 The Australian energy industry has historically been highly dependent on the availability of coal for the generation of electricity. Around 75 per cent of Australia's electricity is from coal-fired generation, largely as a result of the availability of low-cost high-quality coal.⁴ It should be noted that Tasmania primarily depends on hydro-electricity for its energy needs.

5.9 The coal and petroleum industries play a significant role in the Australian economy, in 2008-09 contributing \$68 billion to industry value added, which accounts for 5.7 per cent of the Australian total.⁵

5.10 A further \$19 billion was contributed to the industry gross value added by the electricity and gas supply industries.⁶

5.11 The Energy Supply Association of Australia (ESAA) is the peak industry body representing electricity and downstream natural gas businesses. It told the inquiry that the businesses it represents :

... own and operate some \$120 billion in assets, employ over 52,000 people directly and contribute \$16 billion directly to the nation's gross domestic product each year.⁷

5.12 According to information from the Australian Bureau of Statistics, energy related industries employ around 103 000 people. A breakdown of the areas of employment was provided by the Department of Resources, Energy and Tourism in May 2011, and follows in Table 5.1.

3 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

4 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 72.

5 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

6 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 1.

7 Mr Brad Page, Chief Executive Officer, Energy Supply Association of Australia, *Committee Hansard*, 8 June 2011, p. 1.

Table 5.1 Energy-related industries in Australia 2008-09⁸

Industry	Employment
Coal mining	34 000
Oil and gas extraction	12 000
Petroleum and coal product manufacturing	7 000
Electricity supply	48 000
Gas supply	2 000
Total	103 000

5.13 The Senate Select Committee on Fuel and Energy noted the White Paper in its interim report *The CPRS: Economic cost without environmental benefit*. It also noted that the Electricity Sector Adjustment Scheme would provide economic assistance through allocation of permits to the most emissions-intensive generators.⁹

5.14 The committee received evidence from ESAA at a hearing which highlighted the significance of a well-designed and implemented carbon plan to the economy, and the risk of a poorly-implemented system:

A well-designed emissions trading scheme must be efficient, effective and equitable in the long term and, importantly, must ensure a smooth and orderly economic transition in the short- to medium-term. Failure to ensure an orderly transition could have widespread and potentially long-lasting adverse economic impacts for Australia.¹⁰

Carbon pollution and the energy sector

5.15 The energy sector is Australia's largest source of greenhouse gas emissions, and Australia had the 'highest polluting electricity sector of all OECD [Organisation for Economic Co-operation and Development] countries' in 2008, releasing an average of 0.88 tonnes of carbon dioxide emissions for every megawatt hour of electricity generated.¹¹ This is in contrast to other developed nations such as the United States

8 Department of Resources, Energy and Tourism, *Energy in Australia*, 2011, p. 2.

9 Senate Select Committee on Fuel and Energy, *The CPRS: Economic cost without environmental benefit*, May 2009, p. 132.

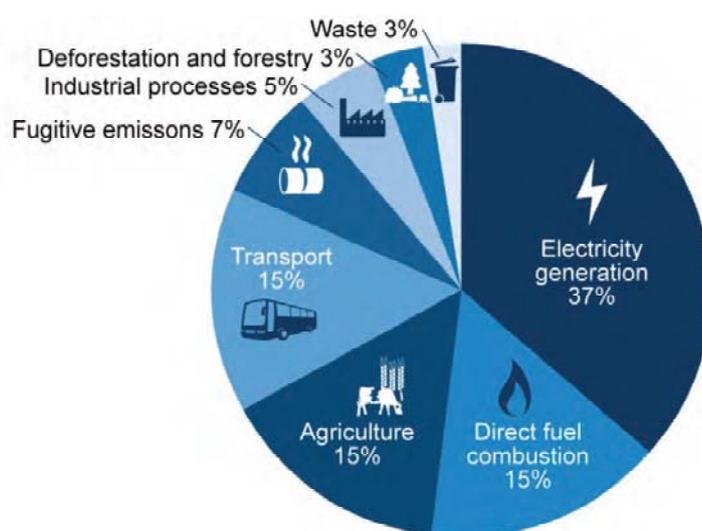
10 Mr Brad Page, Chief Executive Officer, Energy Supply Association of Australia, *Committee Hansard*, 8 June 2011, p. 1.

11 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 72.

and Canada, which produced 0.54 and 0.18 tonnes respectively,¹² though it is important to note here that both the US and Canada have access to low emissions nuclear energy as part of their energy mix.

5.16 Figure 5.1 indicates that electricity generation is responsible for over a third of Australian carbon dioxide emissions.

Figure 5.1 Australia's carbon emissions profile¹³



Source: 2009 emissions from the National Greenhouse Gas Inventory 2011, DCCEE analysis.

5.17 Treasury modelling further indicates that emissions from electricity generation and other stationary energy sources – such as emissions from fuel consumption for electricity generation, fuels consumed in the manufacturing, construction and commercial sectors and in domestic heating – are expected to increase by 8% and 33% respectively from 2010 to 2020.¹⁴

5.18 Following the introduction of the government's climate change plan, according to Treasury modelling, electricity generation and other stationary energy

12 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 72.

13 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 13.

14 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 13.

sources would be responsible for 60% of emission reductions in the period 2010 to 2050.¹⁵

5.19 In addition, the government's package made it clear that they intended to shift electricity consumer's behaviour at both a domestic and commercial level by raising the cost of electricity.

5.20 It should be noted that there are hundreds and thousands of small and medium businesses across Australia that will not receive assistance under the government's scheme. Many of these businesses are energy intensive and cannot become more efficient. However, at the same time, they will not be in a position to fully pass on their additional costs down the supply chain. These are costs that these businesses will have to absorb.

5.21 The manufacturing sector in Australia is already struggling under an uncompetitive exchange rate and a substantial drop in international competitiveness. The introduction of a carbon tax will compound these problems even further.

Government assistance package

The Energy Security Fund

5.22 As part of the government's announced carbon tax plan, an assistance package for the electricity industry will be established. This assistance package incorporates a \$5.5 billion Energy Security Fund, which is designed to 'smooth the transition and maintain energy security'. The Energy Security Fund is comprised of two initiatives: one, payment for closure and, two, transitional assistance measures.¹⁶

Payment for closure

5.23 The first initiative deals with the government's proposed payment for closure of 2000 megawatts (MW) by 2020. The purchase of 2000MW of highly emissions-intensive coal-fired generation is intended to commence the replacement of coal-fired energy assets with other, lower-emission alternatives.¹⁷

15 Department of the Treasury, *Strong growth, low pollution - modelling a carbon price*, 2011, p. 82.

16 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

17 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

5.24 The program will be implemented by the Department of Resources, Energy and Tourism, which will call for expressions of interest from eligible generators.¹⁸ The source of funding for the program is discussed in Chapter 8.

5.25 The timeframe for the payment for closure program has been designed to aid in the negotiation of the closure of Australia's most emissions-intensive coal-fired generation capacity. The closure is intended to allow investment in lower-emission plants.¹⁹

5.26 As stated in the government's carbon tax plan:

Closing existing generation capacity in an orderly way will promote energy security. This is because knowing when old capacity will shut down is valuable information for potential new investors.²⁰

5.27 The role of market security was highlighted by the government in their carbon tax plan:

Giving more confidence to investors is an important part of ensuring our transition to a clean energy future occurs. Providing better information to the market about when new capacity is required means that new investment will be made in a timely manner, underpinning energy security.²¹

5.28 Two plants were flagged for closure by the Hon. Martin Ferguson AM MP, Minister for Resources, Energy and Tourism, at a Melbourne University conference in June 2011 – the Hazelwood plant in the Latrobe Valley, Victoria and the Playford plants in Port Augusta, South Australia. Mr Ferguson was quoted in the media as saying that a carbon price would require the closure of existing coal generators to encourage investment in lower-emission power sources.²²

5.29 In a media release issued by the Australian Greens after the carbon tax announcement, the Deputy Leader of the Australian Greens, Senator Christine Milne,

18 Joint Media Release, the Hon. Martin Ferguson, AM MP, Minister for Resources, Energy and Tourism and the Hon. Greg Combet, AM MP, Minister for Climate Change and Energy Efficiency, 'Expressions of Interest Called for Contract to Close', 30 September 2011, <http://minister.ret.gov.au/MediaCentre/MediaReleases/Pages/ExpressionsofInterestCalledforContracttoClose.aspx> (accessed 5 October 2011).

19 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

20 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, pp 74-75.

21 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

22 Adam Morton and Michelle Grattan, 'Death-knell for 'dirty' Hazelwood', *The Age*, 1 July 2011, <http://www.theage.com.au/victoria/deathknell-for-dirty-hazelwood-20110630-1gt7t.html>, (accessed 12 July 2011).

stated that the payment for closure scheme would 'deliver the first steps in Australia's important and exciting transformation from coal to renewable energy'.²³

5.30 The National Generators Forum (NGF) commented on the contracts for closure program in its submission to the Department of Climate Change and Energy Efficiency on the Clean Energy Legislative Package.²⁴

5.31 It accepted the government's rationale for the program and felt that it 'may give new investors welcome certainty on the timing of market demand for new plant'. However, the NGF was critical of the fact that only four generators meet the 'arbitrary' threshold of 1.2 t/MWh of power. This meant that the tender process was not sufficiently competitive. The NGF argued that the process should be based on the cost per tonne of abatement for closure of the generator.²⁵

5.32 It also felt the government needed to release details of how the program is to be implemented, including the timing of closures.²⁶

5.33 Funding for the contracts for closure is discussed in more detail in Chapter 8 of the Report.

5.34 The role of the Hazelwood and Playford power plants in regional employment will be discussed below.

Transitional assistance measures

5.35 The second initiative of the Energy Security Fund comprises the provision of assistance to coal-fired power stations which are highly emissions-intensive. The assistance will have conditions attached with regard to security of supply and the transition to lower-emission energy sources.²⁷

5.36 Assistance will be provided to generators that stand to incur significant asset value losses. The conditions attached to the assistance measures include the obligation to meet system security requirements, and to make public clean energy investment plans. The investment plans will be required to include:

23 Australian Greens, *The transformation from coal to renewable energy starts today*, media release, 10 July 2011, <http://greens.org.au/content/transformation-coal-renewable-energy-starts-today>, (accessed 14 July 2011).

24 National Generators Forum, *Submission 122*, at <http://www.climatechange.gov.au/government/submissions/clean-energy-legislative-package/~media/government/submissions/cel/public/CEL-Submission-NationalGeneratorsForum-20110922-PDF.pdf> (accessed 22 September 2011).

25 National Generators Forum, *Submission 122* on the Clean Energy Legislative Package, p. 5.

26 National Generators Forum, *Submission 122* on the Clean Energy Legislative Package, p. 6.

27 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 74.

... proposals to reduce pollution from existing facilities and to invest in research and development and new capacity. Information on possible projects identified under the Energy Efficiency Opportunities program will also be included in these plans.²⁸

5.37 The assistance will be in the form of a limited free allocation of carbon permits and cash, which will be allocated until 2016-17. The estimated cost of this program will be \$5.5 billion, which is around 23 per cent of the expected liability for coal-fired power stations.²⁹

5.38 Problems with the compensation offered by the Energy Security Fund was raised by representatives of Loy Yang Power in its submission to the committee and its evidence on 16 September 2011. To give some perspective, Loy Yang Power operates both a brown coal mine in the La Trobe Valley of Victoria and the largest power station in the state.³⁰ It is not eligible for the contracts for closure program.³¹

5.39 Loy Yang Power produces annual emissions of around 19.5 million tonnes. A carbon price of \$23 per tonne will impose an additional \$450 million in costs in the first year of the scheme alone.³² That amount will, of course, increase as the cost of carbon per tonne increases during the fixed price period.

5.40 In its evidence, Loy Yang Power indicated that the government's carbon tax scheme will:

... place pressure on our cash flows, make our refinancing of existing debt more difficult, may cause compliance problems with financial services licences and may lower the creditworthiness of the company.

...

Whilst the scheme will ensure energy security in the short term, it falls short of appropriately compensating generators for business value losses. ... Given the high carbon intensity of brown coal electricity generation, such generators will not be able to pass on their full costs of emissions. ... Over its whole-of-life performance, our modelling shows that Loy Yang Power suffers a significant deterioration in business value, which may impact on the operations of the business in the medium to long term.³³

28 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

29 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

30 Mr Kenneth Thompson, Executive General Manager, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 24.

31 Mr Kenneth Thompson, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 27.

32 Loy Yang Power, *Submission 98*, p. 2.

33 Mr Kenneth Thompson, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 24.

5.41 A new Energy Security Council will be able to advise the government on support measures for strongly affected generators. This includes the provision of advice regarding the offer of a loan to emissions-intensive coal-fired electricity generators. This measure has been announced to ensure market security and stability, and is in recognition of the 'difficult borrowing conditions faced by coal-fired generators'.³⁴

5.42 The loan would be offered to a generator for the 'refinancing of existing debt where a coal-fired generator needs finance but is unable to obtain it from the market on reasonable terms'.³⁵

5.43 Brown coal-fired generators have been reported to have had difficulty in securing funding for the refinancing of debts due to uncertainty in the energy sector surrounding the impact of the carbon tax. Senior Vice-President of Moody's Investors Services, Mr Terry Fanous, stated that the uncertainty has lingered since the announcement of the carbon tax:

There are a number of factors that will play out before the banks have all the elements they need to make an informed decision ... The sector will receive strong compensation but it won't perfectly neutralise the impact of the carbon price. There will be residual concerns that lenders will have about the sector.³⁶

5.44 Loans would also be offered for the purchase of future vintage carbon permits, for a limited time, and on terms which would encourage generators to seek alternative, private finance.³⁷

Assistance for black coal-fired generators

5.45 As brown coal-fired generators are more emissions-intensive, it is expected that they will claim the majority of the \$5.5 billion Energy Security Fund, while black coal-fired generators may not be eligible for any compensation. State-owned black coal-fired generators will be strongly impacted by the carbon tax without receiving any transitional assistance.³⁸ The NSW Minister for Resources and Energy, The Hon. Chris Hartcher MP, was reported in the media to have said that the carbon tax would

34 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

35 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

36 Jonathan Shapiro, 'Power station refinancing risk persists', *The Australian Financial Review*, 13 July 2011, p. 11.

37 Australian Government, *Securing a clean energy future: The Australian Government's climate change plan*, 2011, p. 75.

38 Lenore Taylor and Phillip Coorey, 'Carbon tax on coal hits NSW coffers hard', *Sydney Morning Herald*, 12 July 2011, <http://www.smh.com.au/environment/climate-change/carbon-tax-on-coal-hits-nsw-coffers-hard-20110711-1hax7.html>, (accessed 12 July 2011).

have a negative effect on NSW government revenue.³⁹ This is also addressed in more detail in Chapter 8 of the Report.

5.46 Both Macquarie Generation and Verve Energy explained to the Committee that they would not receive any benefits from the transitional assistance measures. For example, Mr Skelton of Macquarie Generation, speaking after the announcement of the government's package, stated:

... the brown coal generators in Victoria actually are going to access reasonable levels (of) assistance. They will say that it is not enough, and they have probably got a point but we get nothing.⁴⁰

5.47 This view is supported by a submission to the Committee from the NSW Treasury:

... the thresholds for eligibility for all forms of assistance under the current scheme ... are based on emissions intensity levels that are set too high to include any NSW coal-fired generators. Macquarie Generation – which will be one of the biggest losers in the country from the introduction of a carbon price - will not be eligible for any assistance.⁴¹

and analysis commissioned by the Victorian government:

A study by economic consultants ACIL Tasman has concluded that the state's dirtiest power producers are in line to get \$5.22 billion worth of cash payments and free permits out of a total \$5.4 billion national compensation pool announced to ensure no generator is forced to close so rapidly that it risks electricity supply.⁴²

Initial industry reactions

Energy Supply Association of Australia

5.48 Industry body ESAA expressed their 'mixed' reaction to the release of the government's plan for introduction of a carbon tax. In a media release, the Chief Executive Officer stated that while there were positive elements for the future of the stationary energy industry, they have concerns about the transition.

39 Lenore Taylor and Phillip Coorey, 'Carbon tax on coal hits NSW coffers hard', *Sydney Morning Herald*, 12 July 2011, <http://www.smh.com.au/environment/climate-change/carbon-tax-on-coal-hits-nsw-coffers-hard-20110711-1hax7.html>, (accessed 12 July 2011).

40 Mr Russell Skelton, Chief Executive Officer, Macquarie Generation, *Committee Hansard*, 22 July 2011, p. 1.

41 New South Wales Treasury, *Submission 81*, p. 14.

42 Josh Gordon and Tom Arup, 'Victorian power firms to get 97% of carbon compo', *The Age*, 19 July 2011, <http://www.theage.com.au/victoria/victorian-power-firms-to-get-97-of-carbon-compo-20110718-1h1r8.html> (accessed 16 August 2011).

For nearly five years esaa has called for the implementation of an efficient, equitable and enduring emissions trading scheme.

The announcements today satisfy many of esaa's principles for such a scheme, but important questions remain to be answered.

...

But, it is immediately apparent some significant issues remain for the industry.⁴³

5.49 The positive elements of the announcement, in the view of ESAA, centred on:

An improved set of arrangements for the delivery of new renewable energy technologies and the commitment for a single, national set of arrangements to address energy efficiency obligations for energy retailers.⁴⁴

5.50 ESAA is, however, concerned with the aspects of the announced tax which deal with the delivery of secure energy supplies in a competitive and stable manner:

This proposed assistance may mean a few electricity generators are less financially impaired compared to the Carbon Pollution Reduction Scheme, however, a significant number of generators under this arrangement will receive nothing, but still see their asset values diminished.

This sends an unfortunate signal to investors about the security of investing in Australian energy assets.⁴⁵

5.51 ESAA also expressed concern about the effect of the carbon tax on profits, which it was believed could not be passed on, in full, to customers, despite the government package including assistance to households. Commenting on the Carbon Pollution Reduction Scheme, ESAA stated in its submission to the Committee that 'without full costs pass through to retail prices, the viability of retailers and the entire energy supply industry is at risk'.⁴⁶

National Generators Forum

5.52 The Executive Director of the NGF, Mr Malcolm Roberts, expressed a concern regarding the possible expansion of the Energy Efficiency Opportunities program. Mr Roberts was quoted in the media as saying:

43 Energy Supply Association of Australia, *Mixed news for the energy sector in the carbon price package*, media release, 10 July 2011.

44 Energy Supply Association of Australia, *Mixed news for the energy sector in the carbon price package*, media release, 10 July 2011.

45 Energy Supply Association of Australia, *Mixed news for the energy sector in the carbon price package*, media release, 10 July 2011.

46 Energy Supply Association of Australia, *Submission 60*, p. 11.

The carbon price will be the incentive for businesses to find energy efficiencies. Filling in forms and paying consultants will not yield any more energy savings.⁴⁷

5.53 The NGF made more detailed comments on the exposure drafts of the Clean Energy Plan legislation once they were released in a letter sent to all Members of Parliament and its submission on the legislation.⁴⁸ Its criticisms, as highlighted in its letter, included:

- the government's carbon tax plan will cost the generation sector \$40 billion, which will largely be passed on to consumers;
- however, this will result in a change to the industry's emissions of only 3.5% to 2020, based on Treasury's own modelling;
- the starting carbon price of \$23 per tonne is higher than prices elsewhere but still well below the \$60 per tonne which Treasury states is required to lead to a switch from coal to gas fired power. This is an important factor as, below \$60, there is no environmental gain from the carbon price;
- there will not be the certainty needed for long-term investment because of the lack of emissions targets to 2020;
- the plan offers no genuine assistance to electricity generators, even though it requires generators to bear most of the burden of emissions reduction by covering only 62% of greenhouse gas emissions. This is particularly so for black-coal fired power generators in New South Wales, Queensland and West Australia compared to brown-coal fired power generators in Victoria and South Australia; and
- the plan will force up prices by requiring generators to purchase carbon permits in full and in advance for electricity covered by forward contracts and should include deferred payment arrangements.⁴⁹

Energy Users Association of Australia

5.54 In a media release issued by the EUAA after the carbon tax announcement, Executive Director, Mr Roman Domanski referred to the tax as a 'bitter-sweet pill for

47 Annabel Hepworth, 'Coal-fired compo to leave us exposed, energy users warn', *The Australian*, <http://www.theaustralian.com.au/national-affairs/carbon-plan/coal-fired-compo-to-leave-us-exposed-energy-users-warn/story-fn99tjf2-1226091028358>, (accessed 13 July 2011).

48 Letter from National Generators Forum to all Members of Parliament, 15 September 2011, and *Submission 122* on the Clean Energy Legislative Package.

49 Letter from National Generators Forum to all Members of Parliament, 15 September 2011.

Australia's energy consumers'.⁵⁰ A number of concerns were raised, particularly in relation to the delivery of assistance to businesses.

5.55 Mr Domanski stated in the media release that the carbon price would 'significantly increase electricity and gas prices' which would impact on cost of living expenses:

The EUAA estimates that the \$23 per tonne of CO₂ carbon price will add around \$20 per Mega Watt hour to the price of electricity next year, an increase of around 50 per cent on current wholesale electricity prices and at least 10-20 per cent on top of retail electricity prices.⁵¹

5.56 The EUAA also expressed concerns that rising industry costs would be passed on to consumers, and that competitive business would be harmed:

The extra cost will be passed on by businesses and find its way into higher consumer prices. Businesses that compete internationally would be hard pressed to pass on the extra costs and risk losing competitiveness, with flow-on impacts to investment and jobs.⁵²

5.57 Mr Domanski continued that the flow-on impacts may extend to other industries, which could include food processing, foundries, chemical and plastics manufacturers and small businesses which are involved in the international market.

Evidence of electricity generators to the committee

5.58 Macquarie Generation is owned by the New South Wales government and is the largest generator of electricity in Australia. On 22 July 2011, its Chief Executive, Mr Russell Skelton, told the committee:

Even in the federal Treasury modelling, they show a fairly substantial reduction in profitability for both brown and black coal generators – and that is as a consequence of us not being able to pass through the full cost.⁵³

5.59 Ms In't Veld stated that whether Verve Energy could pass on the cost increase to customers depended on its bilateral contracts:

50 Energy Users Association of Australia, *Carbon price announcement and energy consumers*, media release 07/11, 10 July 2011.

51 Energy Users Association of Australia, *Carbon price announcement and energy consumers*, media release 07/11, 10 July 2011.

52 Energy Users Association of Australia, *Carbon price announcement and energy consumers*, media release 07/11, 10 July 2011.

53 Mr Russell Skelton, Chief Executive, Macquarie Generation, *Committee Hansard*, 22 July 2011, p. 2.

... there is ambiguity in the clauses ... and at this stage we are not entirely clear on our ability to pass on. We expect that we may not be able to pass it all on.

...

In the event that we are able to pass on the increase in our production costs to our customers, this would ultimately mean either an increase in tariffs or an increase in the current state government subsidy to Synergy, the state's biggest retailer.⁵⁴

5.60 One point made by Ms In't Veld was that the effect of the government's package on Western Australia, which is not part of the National Energy Market, is potentially worse than on the other states for two reasons:

One, we need the coal diversity for security reasons, so we need to retain coal-fired plant. Two, our gas price is that much higher than the eastern states currently.⁵⁵

5.61 In relation to the profitability of Macquarie Generation, Mr Skelton stated:

Since 1996 ... we have paid \$2.2 billion in dividends, taxes and guarantee fees to the New South Wales government

...

(The carbon tax) will increase our costs in the first year by about \$580 million. Based on all the analysis and modelling that we have done, we are going to have to absorb a fairly substantial proportion of that – somewhere between \$115 to \$230 million. Obviously that means that our profit will reduce substantially and potentially be eliminated.⁵⁶

5.62 On the profitability of Verve Energy, Ms In't Veld, stated:

If a carbon tax came in at \$20 a tonne ... we would be subject to an annual additional increase in our production costs of some \$160 million. If it went up to \$25 a tonne it would be an over \$200 million per annum increase in our production costs. That would be an additional more than 20 per cent increase in our costs every year.⁵⁷

54 Ms Shirley In't Veld, Managing Director, Verge Energy, *Committee Hansard*, 29 April 2011, p. 1.

55 Ms Shirley In't Veld, Verge Energy, *Committee Hansard*, 29 April 2011, p. 4.

56 Mr Russell Skelton, Macquarie Generation, *Committee Hansard*, 22 July 2011, p. 1.

57 Ms Shirley In't Veld, Verge Energy, *Committee Hansard*, 29 April 2011, p. 1.

5.63 Based on the last financial year, she believed that a 20% increase in prices would wipe out Verve Energy's profit.⁵⁸

5.64 Ms In't Veld explained that a carbon price between \$20 and \$30 would not be enough of an incentive to transition to cleaner energy sources:

The modelling that we have done and that others have done indicates that at the current coal prices we have under our existing contract with Wesfarmers, and assuming a gas price of about \$8 a gigajoule, the carbon tax would have to be about \$60 to \$70 a tonne before there would be any incentive for us to move from coal plant to combined cycle gas plant.⁵⁹

5.65 She also doubted the environmental benefit of a \$20 to \$30 carbon price:

CHAIR: From what you have described for Western Australia, a price on carbon—a carbon tax, as is envisaged—in the \$20 to \$30 range, we are told, is going to push up the cost for you, but it is not actually going to result in a reduction in emissions.

Ms In't Veld: That is correct; it will have no impact whatsoever.

CHAIR: You talk about whether you are able to pass those costs on or not. If you are not able to pass those costs on, where does—

Ms In't Veld: That will mean that we will not have as much cash available for maintenance and upgrades, which in the longer term does threaten reliability—your plant starts to run down a bit. In the case of Verve Energy, we are still carrying in excess of \$1 billion in debt, so it will also mean that we will neither be in a position to start paying down that debt nor be in a position to pay the dividends to our owners, the state government. Also, depending on how high the tariff goes, there could be potential impairment issues, which would mean that we would need to be bailed out by the state.⁶⁰

5.66 Evidence given to the inquiry by Loy Yang Power in relation to the Clean Energy Fund is discussed above. The important point to note is that Loy Yang Power believes the government's carbon tax plan will affect its business greatly, in ways other than its bottom line. Loy Yang Power did state that it supported 'the establishment of a well-designed and well-implemented carbon-pricing mechanism ... whilst maintaining investor confidence and security of supply'.⁶¹

58 Ms Shirley In't Veld, Verve Energy, *Committee Hansard*, 29 April 2011, p. 2.

59 Ms Shirley In't Veld, Verve Energy, *Committee Hansard*, 29 April 2011, p. 1.

60 Senator Mathias Cormann, Chair, Senate Select Committee on the Scrutiny of New Taxes and Ms Shirley In't Veld, Verve Energy, *Committee Hansard*, 29 April 2011, p. 2.

61 Mr Kenneth Thompson, Loy Yang Power, *Committee Hansard*, 16 September 2011, p. 24.

5.67 Loy Yang Power's primary concern about the implementation of the carbon tax is that it does not provide for deferred settlement of payments for carbon permits. It estimated that an electricity generation business 'will need to hold positions well in excess of \$10 billion at any one time' to meet their permit obligations. It described this situation as 'financially stressful for all liable parties, prohibitive in some cases, and impossible in others, given arrangements with financiers'.⁶²

5.68 Speaking outside the inquiry, AGL chief economist, Paul Simshauser, stated that '[p]roject financing in Australia has become a lot more problematic'.⁶³ We're a bit of an anomaly globally'. He believed that the ongoing uncertainty caused by the fierceness of the debate over the government's carbon tax has lifted debt costs for investors in the power generation industry. He is quoted in the article as stating:

The cost of project finance and the tenure of the debt just seems to be elevated in terms and cost and shortened in terms of length compared to overseas. The fact that you do have uncertainty over policy directions and there is a real cost in conflicting signals.⁶⁴

5.69 Mr Simshauser felt this uncertainty would continue until the emissions trading scheme began. He was confident, however, that Australia's power requirements would be met, just that the cost of meeting them would increase.

5.70 Submissions on the impact of the carbon tax on the West Australian energy market were received from Griffin Energy. Griffin Energy is a generator and seller of energy, operating the Bluewaters Power Stations 1 and 2, the first privately owned, coal-fired power stations in West Australia.⁶⁵ These are two of the newest and comparatively cleanest coal-fired power stations in the country, built to replace the ageing Muja AB and Kwinana B power stations, supplying about 18% of West Australia's power.⁶⁶

5.71 Griffin Energy agrees with Verve Energy's submissions that the West Australian power industry will not receive assistance under the government's clean energy plan, as it is a black coal-fired energy market.⁶⁷ As black-coal fired energy generators, West Australia's power stations are much less emissions-intensive than east coast brown-coal power generators. There has always been an understanding that

62 Loy Yang Power, *Submission 98*, p. 2.

63 Mark Ludlow, 'Carbon debate lifts debt costs: economist', *Australian Financial Review*, 20 September 2011, p. 7.

64 Mark Ludlow, 'Carbon debate lifts debt costs: economist', *Australian Financial Review*, 20 September 2011, p. 7.

65 <http://www.griffinenergy.com.au/default.aspx?MenuID=76> (accessed 29 September 2011).

66 Interview, Paul Murray and .Senator Mathias Cormann, MP, *Mornings with Paul Murray*, 6PR, 26 August 2011.

67 Griffin Energy, *Submission 44a*.

power generators would be adequately compensated for any loss of asset value arising from the imposition of a carbon tax.

5.72 This situation raises concerns about what Griffin Energy perceives as some perverse policy outcomes that will be produced by the carbon tax in the West Australian energy market. One is that it may lead to an increased intensity in carbon emissions.

5.73 This is a particular problem for West Australian energy security. As it is not a part of the National Energy Market, there are no easily substitutable energy suppliers, unlike on the east coast. As a result the West Australian government will be forced to utilise the Muja AB and Kwinana B power stations.

5.74 Griffin Energy has put the situation this way:

Based on the expectation that no new private coal fired power stations will be built in the WEM – a result of financiers struggling to overcome sovereign risk issues due to existing investments being impaired by no (or inadequate) compensation – the state government, by way of the state owned generation utility, is recommissioning the previously retired Muja AB power station in Collie. Muja AB is one of the oldest and most emission intensive power stations in Australia. Its refurbishment will not improve its emissions intensity to any comparable level of an efficient new technology coal fired facility and it will be brought back into operation as one of the highest CO₂ emitting power stations in the country. In terms of emissions reduction and transitioning the economy away from older emission intensive technology, this represents a perverse policy outcome.⁶⁸

5.75 It suggests that emissions from the Muja AB power station 'will be almost twice the level of the newest coal fired facility in the Collie region'.⁶⁹

5.76 An even more perverse outcome may result from a combination of the carbon tax and the lack of assistance to West Australia power generators.

5.77 The construction of the Bluewater power stations was financed before the global financial crisis, through local and international project finance banks. Those contracts were entered into with an understanding that federal and state government policies would provide 'eligible coal fired generators (with) assistance equal to a "disproportionate loss in asset value"'.⁷⁰ Based on that scenario, Griffin Energy states:

Without the assistance contemplated at the time of contracting and securing finance, Griffin's financial model will show that it is in breach of its debt covenants. It is anticipated that foreign lenders will use the breach to be able to exit the loan facility (and the Australian market more generally). Any

68 Griffin Energy, *Submission 44*, p. 2 and *Submission 44a*.

69 Griffin Energy, *Submission 44*, footnote 2, p. 2.

70 Griffin Energy, *Submission 44a*.

new finance arrangement (coupled with the carbon price) is expected to destroy any residual equity value in the assets. The power stations – the newest in the country – will effectively be the first in Australia to 'fail' under the carbon price legislation.⁷¹ [emphasis added]

5.78 In August 2011 Griffin Energy made submissions about these issues, directly to the government. It met with the Hon. Martin Ferguson AM MP, Minister for Resources, Energy and Tourism, but was only able to meet with advisers to the Prime Minister, the Hon. Julia Gillard MP, and the Minister for Climate Change and Energy Efficiency, the Hon. Greg Combet, MP. It has described the response it received from the federal government:

Upon laying out our concerns the response we received was pretty standard across the board; we don't really care; this is the legislation; you may be an unexpected casualty in the implementation of this legislation but we are not really prepared to talk about assisting you.

...

The way one of the Treasury officials put it to me ... the government's policy is to transition the economy; there will be casualties on the way to doing so and unfortunately you're a casualty.⁷²

5.79 The Committee believes that the decision by the federal government not to adequately compensate the West Australian power companies, in the same way it is compensating their Victorian equivalents, ignores the fact that West Australia is not a part of the National Energy Market, to that state's great disadvantage. This has significant implications for the energy security of West Australia, as well as being likely to result in an increase in its carbon emissions, moving forward.

5.80 In Queensland, it has been reported that:

The State Government's electricity-generating companies posed combined losses of almost \$1.1 billion in the 2010-11 financial year, almost all of it due to the Federal Government's planned

CS Energy, Stanwell Power and Tarong Energy were forced to write down the value of their coal-fired power stations by hundreds of millions of dollars because of the proposed \$23-a-tonne carbon price.

...

Treasurer Andrew Fraser said the asset write-downs would be partially offset by a \$490 million increase in the value of gas and hydro assets.⁷³

71 Griffin Energy, *Submission 44a*.

72 Interview, Paul Murray and Wayne Trumble, General Manager, Griffin Energy, *Mornings with Paul Murray*, 6PR, 3 October 2011.

5.81 The Queensland power generators are unlikely to receive compensation for these losses from the government, for the same reason as their other, non-Victorian counterparts.

Regional employment and small business

5.82 Witnesses and submitters to the inquiry expressed their concern regarding employment in regional areas and the effect the carbon tax would have on small business in Australia.

5.83 The effect on regional economies and employment levels is explored below, in particular focussing on the Hazelwood power station and mine; and Playford power stations, including Leigh Creek township.

Hazelwood power station and mine

5.84 The Hazelwood Mine in the Latrobe Valley produces around 18 million tonnes of brown coal annually, which fuels the power station. The power station has a capacity of 1675MW, and supplies up to 25 per cent of Victoria's electricity.⁷⁴ The plant currently directly employs 500 staff, and has 300 alliance contractors.⁷⁵

5.85 Mr Tony Concannon, Chief Executive of International Power, the owner of the Hazelwood plant, has stated that a phased closure would be considered.⁷⁶ He also stated that International Power would enter into negotiations with the government regarding the phased closure in order to remove uncertainty.⁷⁷

5.86 The job losses incurred through the closure of the plant would have a significant impact on the local community and economy. The Prime Minister, the

73 Robert MacDonald 'CS Energy, Stanwell Power and Tarong Energy write down value by combined losses of almost 4.1 billion due to proposed carbon tax' *Courier-Mail*, 1 October 2011, <http://www.couriermail.com.au/news/queensland/cs-energy-stanwell-power-and-tarong-energy-write-down-value-by-combined-11-billion-due-to-proposed-carbon-tax/story-e6freoof-1226154446349> (accessed 5 October 2011).

74 International Power, *Hazelwood Power Station and Mine*, <http://www.ipplc.com.au/the-company/assets/hazelwood-power-station-and-mine/>, (accessed 12 July 2011).

75 International Power, *Hazelwood Power Station and Mine*, <http://www.ipplc.com.au/the-company/assets/hazelwood-power-station-and-mine/>, (accessed 12 July 2011).

76 A. Morton and M. Grattan, 'Death-knell for 'dirty' Hazelwood', *The Age*, 1 July 2011, <http://www.theage.com.au/victoria/deathknell-for-dirty-hazelwood-20110630-1gt7t.html>, (accessed 12 July 2011).

77 T. Arup, 'Power plants agree to hold buyout talks', *Sydney Morning Herald*, 11 July 2011, <http://www.smh.com.au/environment/climate-change/power-plants-agree-to-hold-buyout-talks-20110710-1h920.html>, (accessed 12 July 2011).

Hon. Julia Gillard MP, was quoted in the media as saying that the government would work with communities to lessen the impact of closures.⁷⁸

5.87 Senator Milne, Deputy Leader of the Australian Greens, stated in a press release that the Greens would work to ensure that communities would be supported:

The Greens, the government and the independents are absolutely committed to making sure workers and communities who currently rely on coal are helped through this transformation with structural adjustment support of some \$200 million.⁷⁹

5.88 Senator Milne stated that staff and communities directly affected by the closure of Hazelwood power plant would be assisted:

Partial closure of coal power plants like Hazelwood could begin immediately, with the necessary support for workers and communities.⁸⁰

Playford power stations

5.89 The Playford power stations at Port Augusta are part of the Flinders Power portfolio of Alinta Energy, along with the Northern power station. The Playford stations have a capacity of 240MW. They make up the smaller capacity stations of the portfolio.⁸¹ The Northern and Playford stations, along with the Leigh Creek Coalmine, township and railway, provide more than 30 per cent of South Australia's energy.⁸²

5.90 The Playford stations were acquired in November 2006, but were commissioned in 1963 and are fuelled by brown coal from the Leigh Creek Coalfield, also owned and operated by Alinta.⁸³ The Leigh Creek township has a population of 600.

78 ABC News, 'Gillard says energy secure under carbon tax', *Australian Broadcasting Corporation*, 12 July 2011, <http://www.abc.net.au/news/stories/2011/07/12/3267838.htm>, (accessed 12 July 2011).

79 Australian Greens, *The transformation from coal to renewable energy starts today*, media release, 10 July 2011, <http://greens.org.au/content/transformation-coal-renewable-energy-starts-today>, (accessed 14 July 2011).

80 Australian Greens, *The transformation from coal to renewable energy starts today*, media release, 10 July 2011, <http://greens.org.au/content/transformation-coal-renewable-energy-starts-today>, (accessed 14 July 2011).

81 Alinta Energy, *Flinders*, <http://alintaenergy.com/assets/generation/flinders/>, (accessed 13 July 2011).

82 Alinta Energy, *Annual Report*, 2009-10, p. 12.

83 Alinta Energy, *Flinders*, <http://alintaenergy.com/assets/generation/flinders/>, (accessed 13 July 2011).

5.91 Alinta employs more than 750 people across Australia and New Zealand, and operates ten power generation businesses.⁸⁴ Alinta also provides gas and electricity to commercial, industrial and retail customers in Australia.⁸⁵

5.92 It has been reported widely in the media that Playford power stations are likely to be targeted for payment for closure by the government. Alinta has confirmed that it will put up the Playford stations for closure.⁸⁶

5.93 The South Australian Minister for Energy, Mr Michael O'Brien MP, stated in an interview that the Playford B station would be decommissioned:

The Commonwealth have actually made it quite plain that Playford B will have to be decommissioned. It is actually one of two plants. The other is Hazelwood in Victoria. Those two plants will be closed by way of a contract for closure.

Alinta have indicated to me that the Commonwealth want the contract for closure for Playford B signed relatively quickly and Alinta are quite happy with this because it means that they can then get on with the work of procuring the replacement gas plant.⁸⁷

5.94 The Mayor of Port Augusta, Ms Joy Baluch, expressed concern regarding the future of the town, and at the uncertainty residents face.

This Rann Government and series of governments before have had at least 20 years to consider an alternative energy, be it gas or thermal solar. But they have done nothing about this.⁸⁸

5.95 The Chief Executive Officer of South Australia's Chamber of Mines and Energy, Mr Jason Kuchel, highlighted the implications of the payment for closure of the Playford stations:

In this case of course it's not just about shutting down a power station but also about shutting down potentially a mine, a rail and an entire town.⁸⁹

84 Alinta Energy, *Welcome*, <http://alintaenergy.com/>, (accessed 13 July 2011).

85 Alinta Energy, *Annual Report*, 2009-10, p. 1.

86 T. Arup, 'Power plants agree to hold buyout talks', *Sydney Morning Herald*, 11 July 2011, <http://www.smh.com.au/environment/climate-change/power-plants-agree-to-hold-buyout-talks-20110710-1h920.html>, (accessed 12 July 2011).

87 Mr Michael O'Brien, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

88 Ms Joy Baluch, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

89 Mr Jason Kuchel, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

5.96 A small business owner from the Leigh Creek township has also expressed concern for the future of the town stated:

I think people will not like to see the demise of the town and who knows what's going to happen down the track?

Because Leigh Creek is here wholly and solely to get the coal out to send to Port Augusta it would have a devastating effect on the town if it's not needed.⁹⁰

5.97 The inquiry received a particularly well-researched and thoughtful submission from the Moe and District Residents Association Inc (MADRA) addressing the snowball effects of the closure of brown-coal fired power stations on its region. The Committee has no reason to believe other regional economies where brown-coal fired power stations are major employers would not suffer similar problems.

5.98 MADRA estimated that the Moe region has an unemployment rate three times higher than the national average.⁹¹ Its submission went on to consider the probable effects of the closure of the Yallourn and Energy Brix power stations, which are under discussion as part of the contracts for closure program:

On the long held basis that each power industry job has a multiplier effect in the regional economy of 2.6 other jobs, we estimate that closure of these power stations will cause a minimum 4,000 total job loss within our region.⁹²

5.99 In MADRA's view, the government had not given any consideration to addressing these expected job losses. Instead, it believes the government 'has channelled its efforts into assuaging mining and other interests around Australia, even though modelling of a carbon tax on those sectors has revealed little significant negative impact'.⁹³ Accordingly, it rejected the government's plans to close brown-coal fired power stations 'without any firm commitments to redeploy affected workers into new, technology-based jobs created in this region'.⁹⁴

Committee comment

5.100 The committee takes the view that the introduction of the proposed carbon tax puts Australia's energy security at risk.

90 Ms Desley Wardell, MP, *PM [transcript]*, 11 July 2011, <http://www.abc.net.au/pm/content/2011/s3266745.htm>, (accessed 13 July 2011).

91 Moe and District Residents Association Inc, *Submission 99*, p. 3.

92 Moe and District Residents Association Inc, *Submission 99*, p. 1.

93 Moe and District Residents Association Inc, *Submission 99*, p. 2.

94 Moe and District Residents Association Inc, *Submission 99*, p. 7.

5.101 The introduction of the carbon tax will increase the cost of electricity for families and although the government has indicated that compensation will be paid to families, those families whose livelihoods are lost as a result of the loss of jobs will need more than the proposed \$10.10 per week to cover their increased cost of living.

5.102 The committee also considers that the government's compensation package will not be sufficiently adequate for regional areas and communities that will struggle with greater social displacement as a result of power station closures and cut backs to energy generation and mining.

