3

General issues about the bills

Economic impacts of the legislation

The Treasury modelling

3.1 The most reputable and thorough research on the effects of the legislation and pricing emissions on the Australian economy has been conducted by the Treasury. In July 2011, the Government released the *Strong Growth, Low Pollution* report. The Treasury modelled two scenarios: one assuming the world adopts a 450 parts per million stabilisation target and a second assuming the world adopts a 550 parts per million stabilisation target. The latter was adopted as the 'core' policy scenario and includes the following assumptions:

- Australia's emission reduction target is to reduce emissions 5 per cent below 2000 levels by 2020 and 80 per cent below 2000 levels by 2050;
- an initial carbon price of $20 per tonne of carbon dioxide equivalent, (CO_2-e) rising by 5 per cent annually, plus inflation (resulting in a 2050 price of $131 per tonne);
- assistance for emissions-intensive trade exposed industries commences at 94.5 per cent or 66 per cent, depending on the industry, reducing by 1.3 per cent annually;
- an effective carbon price is applied to businesses using liquid fuels from 2012-13 (excluding light vehicles, agriculture, forestry and fishing) and to heavy on-road vehicles from 2014-15 (this last measure was not agreed by the MPCCC and is not included in the bills, although it is currently Government policy);

- a worldwide greenhouse gas concentration level equivalent to 550 parts per million as the target for 2100, which is consistent with the low end of 2020 emission reduction pledges made in Copenhagen in 2009 and Cancun in 2010;
- most other countries commencing climate action by 2020 and all doing so by 2031;
- a global carbon price emerging by 2016.[1]

3.2 The Treasury modelled the effects of these policies on the Australian economy to 2050. Overall, the Treasury found that there would be major reductions to growth in carbon emissions at the cost of a marginal reduction in economic growth. Average income growth in Australia is expected to slow by 0.1 per cent annually. Domestic emissions are expected to reduce from current levels of 578 Mt of CO_2-e to 545 Mt in 2050, or under 200 Mt in 2050 if abatement sourced overseas is included as well. This compares against projected domestic emissions of 1,008 Mt if there is no carbon pricing.[2]

3.3 The second scenario assumed that the 2100 global target for greenhouse gas concentration levels would be 450 parts per million. This gives a 50 per cent chance of holding the increase in global temperature to less than 2 degrees celsius. The 550 parts per million target gives a 50 per cent chance of holding the increase in global temperature to less than 3 degrees celsius. The economic outcomes under this more ambitious scenario are very similar to the core scenario. GDP will grow at the same rate as the core scenario. Gross National Income (GDP adjusted for international dividends and interest payments) will be 0.6 per cent lower in 2050 than it would be compared with the core scenario.[3] This appears to be due to greater international trade in emissions permits.

3.4 The Treasury also modelled the effects of delaying global action on climate change. Delays increase the costs of achieving a particular outcome because delays allow emissions to increase over time. Greater reductions are required to then achieve the same result. The Treasury stated that

1 Australian Government, *Strong Growth, Low Pollution: Modelling a Carbon Price: Overview*, July 2011, p. 17, <http://www.treasury.gov.au/carbonpricemodelling/content/overview.asp> viewed 29 September 2011.

2 Australian Government, *Strong Growth, Low Pollution: Modelling a Carbon Price: Overview*, July 2011, pp. 4, 18, <http://www.treasury.gov.au/carbonpricemodelling/content/overview.asp> viewed 29 September 2011.

3 Australian Government, *Strong Growth, Low Pollution: Modelling a Carbon Price*, July 2011, p. 102, <http://www.treasury.gov.au/carbonpricemodelling/content/report.asp> viewed 29 September 2011.

delaying global action by three years adds 20 per cent to the first year of global mitigation cost. A further three year delay adds a further 30 per cent to the first year mitigation cost. In evidence, the Treasury explained how delays would have an economic cost on Australia within the international context:

> There are two potential scenarios here. If the rest of the world takes action and Australia does not take action there is the potential for retaliatory action by other nations. Logic would suggest that, if other countries are going to impose action on Australia rather than Australians imposing it on themselves, it may well be more expensive. Particularly if any action in the future might relate around trade, it could get into the messy world of international trade obligations and international linkages. Australia relies heavily on trade and analysis in the past has found that anything that taxes trade in isolation from the rest of the economy turns out to be very expensive in terms of potential economic growth. In the scenario where the world was to move and Australia was not to move, if there was retaliatory action, it is likely to be more expensive than if Australia imposes an efficient market mechanism internally on itself.
>
> The second issue is if that was not to happen—if the world takes action and Australia does not take action and then Australia eventually takes action off its own bat. It is potentially quite expensive to adjust at that point because, if someone has a dollar of investment and they are looking at investing in a country that has already moved along the path to reducing their emissions versus a dollar of investment in a country that has a high emission intensity industrial structure, it could well be that the investment moves away from Australia quite sharply, and that could be quite a sharp transition to a lower emission future. Sharp transitions involve higher economic cost.[4]

3.5 Climateworks Australia confirmed that delays will have significant economic costs to Australia, which include costs by us locking in more high-emission infrastructure and equipment that put us further away from our goals:

> ... if we delayed until 2015 commencing these actions to reduce emissions, we would increase the cost of achieving the minimum five per cent target by $5 billion in Australia. We also quantified

4 Ms Meghan Quinn, Treasury, *Committee Hansard*, Canberra, 26 September 2011, pp. 7-8.

> that we have already increased the cost by $1 billion by delaying from 2010 to 2011. The reason for that is that a lot of the opportunities you will see that we have modelled are opportunities to save money through energy efficiency, and so each year that we do not undertake that year's share of that activity we allow buildings to be built or refurbished or vehicles to be purchased at lower than ideal emission standards. Those emissions are locked in and therefore the financial savings are lost to us. Equally, it gets more extensive to catch up later in the decade, as we must then draw upon more expensive opportunities.[5]

3.6 The Treasury report includes sensitivity analysis of the modelling. The Treasury found that the findings were robust to varying the assumptions.

3.7 On Wednesday, 21 September 2011, the Treasury released updated modelling to take into account the detail included in the bills and other policy announcements. The first major finding in the update is that the slightly higher carbon price of $23 a tonne will reduce domestic emissions by an additional 5 Mt of CO_2-e in the first three years of the scheme. The second is that the policy announcement in relation to heavy road vehicles from 1 July 2014 reduces emissions by 20 Mt of CO_2-e by 2050 and reduces the overall cost of meeting Australia's emission targets by spreading abatement action more evenly across the economy.

3.8 The other macroeconomic findings in relation to the Australian economy remained largely the same as in the July report.[6]

3.9 It might be surprising that putting a price on carbon would generate such significant savings in greenhouse emissions at such a small cost to economic growth. The reason is that the free market adapts around the carbon price. As the Treasury stated in evidence:

> What happens when people take action typically is that they shift the emissions intensity of their output and do not change the level of their GDP. We find in history that the level of GDP has grown quite strongly in countries while their emission intensity has fallen through time. That is the intention of the overall package to put a

5 Ms Anna Skarbek, Climateworks Australia, *Committee Hansard*, Melbourne, 27 September 2011, p. 44.

6 Australian Government, *Strong Growth, Low Pollution: Modelling a Carbon Price: Update,* September 2011, p. 1, <http://www.treasury.gov.au/carbonpricemodelling/content/update_report.asp> viewed 29 September 2011.

> price on carbon. You get continued growth and emissions falling or emissions staying the same and emissions intensity falling.[7]

3.10 To complement this macro-economic explanation, Westpac gave a micro-economic perspective. They stated that, once businesses has certainty about a regulatory approach or a market, they can start managing the risks and adapting:

> It goes back to the point that we keep making—that is, that when you have certainty around the framework and you have certainty around what you can expect, you are able to manage that risk in a highly effective manner. Australian business is actually very used to managing these sorts of market based variables and doing it very well.[8]

3.11 Although it is tempting to focus on the costs of reducing greenhouse emissions, such an analysis does not cover the whole picture. Importantly, it does not consider the large costs of not taking action on climate change, such as the adaptive costs to the Australian economy of addressing the impacts of rising sea levels and the changing suitability of land for agriculture. Viewed in this light, the decrease in economic growth of 0.1 per cent annually is a modest price to prevent large scale environmental changes.

Criticisms of the Treasury modelling

3.12 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. Some participants also took this view. For example, Westpac stated, 'While we think this is a fair assessment overall, this does not mean there may not be significant adjustments within and/or between industries'.[9]

3.13 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.[10] The Treasury's response was what they have done is to 'use the Cancun pledges and operationalise

7 Ms Meghan Quinn, Treasury, *Committee Hansard*, Canberra, 21 September 2011, p. 8.

8 Ms Emma Herd, Westpac, *Committee Hansard*, Sydney, 28 September 2011, p. 23.

9 Westpac, *Submission 12*, p. 5.

10 National Lime Association, *Submission 4*, p. 4; Dr Alan Moran, Institute of Public Affairs, *Committee Hansard*, Melbourne, 27 September 2011, p. 57.

them in our modelling',[11] 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.

3.14 The Treasury noted that countries can reduce their emissions in various ways and that this need not be initiated through a nationally coordinated scheme:

> In order to get a net purchase, it does require the firms within the United States to be able to purchase abatement from overseas. They could still do that. This is a hypothetical scenario about what different frameworks people could put in place in terms of different climate change mitigation policies, but there are certainly different mechanisms whereby the United States could have a part regulation regime and a part allowance of purchase of abatement from overseas. It depends a little bit on the framework the United States puts in place. For example, the Californian state is looking at the possibility of an emissions trading scheme. There are other trading schemes of different forms in place at the moment in the United States. It could well be those mechanisms that end up in place, with the purchase of abatement from overseas, or it could be through regulatory approaches where the Environmental Protection Agency allows generators, for example, to meet certain emission intensity targets by purchasing abatements from overseas.[12]

3.15 This was corroborated by the green energy sector. The Clean Energy Council stated in evidence that, 'There is now a long-term shadow price on carbon in Australia'.[13] Pacific Hydro noted:

> We are trading carbon credits out of our Chilean projects. We have invested about $1.7 billion on the back of international carbon trading. In many respects the market is off and running. Europe is trading in carbon. It does not matter what happens in the next round of Kyoto, they will continue to do that. China is starting to move down that path and so are many jurisdictions in the US. In the absence of an international agreement, there are a whole series of regional agreements which are powering ahead and driving this

11 Dr David Gruen, Treasury, *Committee Hansard*, Canberra, 26 September 2011, p. 5.

12 Ms Meghan Quinn, Treasury, *Committee Hansard*, Canberra, 26 September 2011, p. 5. See also Ms Meghan Quinn, Treasury, *Committee Hansard*, Canberra, 26 September 2011, p. 6.

13 Mr Matthew Warren, Clean Energy Council, *Committee Hansard*, Melbourne, 27 September 2011, p. 40.

> international action. There is a global price in carbon without a global agreement.[14]

3.16 In other words, emissions markets are developing from the ground up, rather than from the top down. It is preferable for Australia to become part of this process now because this will give us greater opportunities to influence the development of the market and obtain arrangements that are to our benefit or, at least, not to our detriment.

The view from the financial markets

3.17 Companies that are listed on the Australian Securities Exchange (ASX) must comply with various listing rules. Chapter 3 of the rules covers continuous disclosure, with rule 3.1 stating:

> Once an entity is or becomes aware of any information concerning it that a reasonable person would expect to have a material effect on the price or value of the entity's securities, the entity must immediately tell ASX that information.[15]

3.18 Although this rule is general in application and is not designed to cover climate change policy, any entity that had formed a view that climate change policy would adversely affect its financial performance would be required to report this to the ASX. Therefore, disclosures to the ASX give a useful indication of what businesses believe are affecting their profitability. These announcements would generally be at least as reliable as statements their peak bodies might make in political debate because companies risk de-listing for non-compliance with listing rules. The consequences for a business organisation for making a misleading statement in political debate are much less direct and certain.

3.19 The committee asked the Investor Group on Climate Change what disclosures were being made to the ASX in relation to climate change policies:

> My understanding of the market obligation is that, when a company knows something to be true or knows that there will be an impact, there is an obligation to disclose to the market. So the question is: does the company have enough information to know something and, therefore, make a statement? Our observation is that many companies have made disclosures to the ASX. We study

14 Mr Andrew Richards, Pacific Hydro, *Committee Hansard*, Melbourne, 27 September 2011, p. 54.

15 ASX, Listing Rule 3.1. <http://www.asxgroup.com.au/media/PDFs/Chapter03.pdf> viewed 29 September 2011.

> all the listed companies but we studied 14, I think, through Deutsche Bank very recently. They were highly emissions intensive companies and we found that all of those companies identified modest financial impacts from the scheme, generally below one per cent of earnings.[16]

3.20 In other words, the companies that face the largest incentive under the bills to change their operations and reduce emissions are predicting a reduction in earnings of below 1 per cent in what appears to be the short to medium term.

3.21 This compares with some statements made by industry. For example, in June the Australian Coal Association stated that 4,000 potential jobs would be at risk within the first three years of an emissions trading scheme. It stated that such a scheme would cost the industry $18 billion in the first nine years.[17]

3.22 The two sets of comments are a long distance apart. The committee takes the view that statements to the ASX by emissions intensive industries about future profitability are much more likely to reflect their financial position. Comments made by their industry representatives are much more likely to reflect their political position and are better interpreted as a request for further industry assistance. This matter is discussed below.

Specific economic issues

Growth in the clean technology industries

3.23 The Government's clean energy future package takes two approaches to encouraging a cleaner Australian economy. To assist in the initial stages, the package includes several industry programs to help Australian industry make the shift towards clean technology. In total, they comprise over $14 billion in funding. The components include:

- the Clean Energy Finance Corporation, which will invest in renewable energy technologies and more broadly in clean energy such as low-

16 Mr Nathan Fabian, Investor Group on Climate Change, *Committee Hansard*, Sydney, 28 September 2011, p. 14.

17 Australian Coal Association, 'Carbon tax impact could close coal mines within three years', *Media Release*, 14 June 2011, <http://www.australiancoal.com.au/resources.ashx/MediaReleases/101/MediaRelease/5AEAF2DE9A42B36E1251939D0C47109B/14_June_ACA_Release_ACIL_Tasman.pdf> viewed 30 September 2011.

emission cogeneration technology. The Corporation will have an investment pool of $10 billion of public funds and it will operate independently of the Government.

- the Australian Renewable Energy Agency, which will more efficiently administer current Government grants for renewable energy. It will independently administer $3.2 billion in current Government grants for renewable energy. Its funding amount will be increased through dividends paid by the Clean Energy Finance Corporation.
- the clean technology investment program, which will provide grants to large scale businesses to support energy efficient capital equipment and low-pollution technologies on the basis that industry will provide three dollars for every dollar from the Government. The program will provide a total of $800 million.
- the clean technology, food and foundries investment program, which will serve a similar role and work in a similar way to the clean technology investment program. This sub-program will be limited to the food processing, metal forging and foundry industries. These industries are trade exposed and have higher energy costs than general manufacturers. The program will provide $200 million over six years.
- the clean technology innovation program, which will provide $200 million over five years for grants to support business research and development in renewable energy, energy efficiency and low-pollution technology. The Government will match private sector investment dollar for dollar.
- the clean energy skills program, which will provide $32 million to educational institutions and industry develop the materials and expertise to help tradespersons and professionals move towards energy efficient services and products.[18]

3.24 These programs will operate in an economy where greenhouse emissions will become more expensive and the private sector will face greater financial rewards for developing and commercialising clean technologies. As with any other sector of the economy, clean technology has the potential to generate direct and indirect jobs and grow over time. Pacific Hydro gave an example of this in evidence:

18 Australian Government, *Securing a clean energy future: The Australian Government's Climate Change Plan*, 2011, pp. 64-66, 133-34 <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/07/Consolidated-Final.pdf> viewed 30 September 2011.

> Over 10 years ago Pacific Hydro built the first non-government wind farm in Australia at Codrington. We sourced our towers then from Keppel Prince Engineering, who predominantly at that stage serviced the aluminium smelter. Eleven years down the track now there are 250 people fabricating towers. Similar things have been replicated in South Australia and elsewhere. Portland is a fantastic example where the wind industry is the second largest employer in the region behind the aluminium smelter.[19]

3.25 Similarly, the Australian Manufacturing Workers Union (AMWU) also recognised that clean technology has great potential in Australia:

> Because of the science, we know we have to reduce emissions. We know the need to reduce high-emissions activities is already creating global demand for low-emissions technology. We see the potential of clean technology jobs. We see the $6 trillion global clean technology industry, so we know the future of Australia's manufacturing industry is tied to the extent to which we invest in and are successful in clean energy generation and energy efficient technology development. We have approached the challenge of carbon emissions reduction with our eyes wide open so we can take advantage of the opportunities that the move to low-carbon economies will bring for Australian industry and Australian manufacturing in particular.[20]

3.26 However, the opportunity to secure some of the clean technology industry depends on a number of factors. As the Treasury noted in its modelling, countries that move late will obtain less investment and employment than early movers.[21] The reasoning behind this is clear. Countries that already have the knowledge and infrastructure for an industry will be cheaper places to invest, all else being equal, than countries without them. Vestas Australian Wind Technology confirmed this in evidence:

> Vestas has previously tried its hand at establishing manufacturing of wind turbine components in Australia, but that venture did not succeed because we simply did not have the scale here to make sure that those jobs were sustainable and that market was large enough. Instead, in recent years we have added a lot of manufacturing jobs in the US and a lot in China and still plenty

19 Mr Andrew Richards, Pacific Hydro, *Committee Hansard*, Melbourne, 27 September 2011, p. 54.

20 Mr Timothy McCauley, AMWU, *Committee Hansard*, Melbourne, 27 September 2011, p. 25.

21 Australian Government, *Strong Growth, Low Pollution: Modelling a Carbon Price: Overview*, July 2011, p. 3, <http://www.treasury.gov.au/carbonpricemodelling/content/overview.asp> viewed 29 September 2011.

> more in Europe as well. We go where our markets are and where our markets are the biggest so we cut out transport costs. That is the thing that Australia has missed out on in recent times—we have not got to that scale. You can model this and you can model that and everyone turns up with their own set of independent modelling, but you are never going to know until you actually get to that scale. If you look at what other countries have done elsewhere, beyond our shores, those that have gone for renewable energy, and have gone big and gone early, are the ones that have the jobs now.[22]

3.27 As time progresses, the window of opportunity for firms to invest in particular countries to enter the market will reduce in size and significant opportunities will no longer exist when the market matures. In evidence, the committee asked wind generators whether the window was still open in Australia:

> I think it is still open, as long as the clean energy bill goes forward in its strength and as long as we see relatively soon—probably in the next three to four years—a policy of what is going to happen beyond the current large-scale renewable target, because we are all sitting here. We know we are building projects to 2020, which will not be 2020. It will be 2018 or something like that when it is contracted out, and then the market is finished. All we know is that we have legislation and a Clean Energy Finance Corporation, but we do not know what either of them are going to do. So it is very difficult at the moment. What you will see is people investing in the large-scale renewable program for the next six years and, if there is nothing else in front of us at that point in time, everybody will close down shop.[23]

3.28 The clean energy bills represent an important opportunity for Australia to further develop its clean technology sector. Significant parts of the world economy, including Europe, are moving towards clean technology and Australia, if it moves now, will be able to maximise its portion of these markets. The longer Australia delays adopting these technologies, the more likely it is to become a net importer of them. Passage of the bills will give Australian firms a greater financial reward for clean technology innovation and give more long run opportunities to local manufacturing.

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22 Mr Ken McAlpine, Vestas Australian Wind Technology, *Committee Hansard*, Melbourne, 27 September 2011, p. 55.

23 Mr Brett Thomas, Acciona, *Committee Hansard*, Melbourne, 27 September 2011, p. 56.

Claims about jobs

3.29 In the debate over the effect of climate change policies on the Australian economy, a number of claims have been made about job losses. For example, the committee heard in evidence that the Minerals Council of Australia claimed that 24,000 jobs would be lost from the mining sector over 10 years. On the other hand, the Climate Change Institute has made projections that 34,000 clean technology jobs would be created from such policies, also over 10 years. The net effect of these claims is close to zero.[24]

3.30 The Treasury has made macro-economic projections about jobs under climate change policies compared with business as usual. In evidence, the Treasury stated that jobs would grow by 1.6 million, with or without carbon pricing, by 2020.[25] The economy will adapt over time with emissions intensive industries growing more slowly and clean industries growing more quickly. The Treasury expects that Australia's highly skilled, educated and flexible labour force will be well placed to meet this challenge.[26]

3.31 The committee asked Professor Bruce Chapman, an expert in labour economics, to explain how the labour market works. Professor Chapman's key point is that the labour market experiences a high degree of turnover. People are constantly entering employment, leaving employment, and changing jobs. This idea is well accepted among labour economists. In a typical business day, 8,000 people start a new job and 7,900 leave a job.[27]

3.32 Against the background of a constantly evolving labour market, the employment effect of climate change policies of 30,000 jobs over 10 years is a low order issue. Professor Chapman stated:

> My essential point—because I am not an expert on climate change policy but I know a bit about labour markets—is that, if you want to have a debate about carbon pricing, do not think about the jobs. The jobs issue is trivial in aggregate.[28]

3.33 Although no adverse employment effects are expected at the macro level, the Government has recognised that industry requires time to adjust to the

24 Professor Bruce Chapman, private capacity, *Committee Hansard*, Canberra, 26 September 2011, p. 18.

25 Ms Meghan Quinn, Treasury, *Committee Hansard*, Canberra, 26 September 2011, p. 1.

26 Treasury overview document, pp. 5-6.

27 Professor Bruce Chapman, private capacity, *Committee Hansard*, Canberra, 26 September 2011, p. 19.

28 Professor Bruce Chapman, private capacity, *Committee Hansard*, Canberra, 26 September 2011, p. 19.

new arrangements. The effects of an economic shock are reduced if they are spread over time and the economy can naturally adjust.[29]

3.34 To facilitate this adjustment, the government has announced a major program to assist the economy in its transition to clean technologies. The jobs and competitiveness program will allocate free carbon permits to the high emission industries that are highly exposed to international competition. Without this assistance, businesses in this category would face additional costs while many of their competitors would not, thus placing them at a disadvantage.

3.35 The most trade exposed and emissions intensive industries will receive permits equivalent to 94.5 per cent of their emissions costs based on historical data. Less trade exposed and emissions intensive industries will receive permits equivalent to 66 per cent of their emissions costs, also based on historical data. This assistance will be reduced by 1.3 per cent annually to encourage businesses to develop clean technology. Using a historical baseline gives companies a financial reward for reducing emissions. If their rate of reducing emissions is sufficiently rapid, they will keep their emissions below the number of free permits they are issued and will not pay for the emissions they produce.

3.36 In some circumstances, industry assistance can be problematic if businesses come to be too reliant on it. Ultimately, businesses should be making profits, rather than asking for more assistance. The jobs and competitiveness program manages this in two ways. Firstly, assistance will gradually reduce by 1.3 per cent annually. The second mechanism is that the Productivity Commission will regularly review the program, with the first review occurring in 2014-15. If changes to the program are proposed and accepted by the Government, businesses will still have some certainty because changes to the program can only be made after a period of notice. The initial rates of assistance are guaranteed for the first five years and three years notice is required for any changes.[30]

3.37 Therefore, while the profile of Australian industry will change over time, the Government has put in place very generous arrangements to make this transition gradual and give businesses time to adjust. The committee expects that, at the macro level, the changes in job numbers will be a low order issue. At the firm level, businesses that make the best attempts to reduce their emissions will receive financial rewards for doing so.

29 Ms Meghan Quinn, Treasury, *Committee Hansard*, Canberra, 26 September 2011, p. 8.

30 Australian Government, *Securing a clean energy future: The Australian Government's Climate Change Plan*, 2011, pp. 55-56 <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/07/Consolidated-Final.pdf> viewed 30 September 2011.

The coal industry

3.38 The coal industry will be affected by the legislation in a number of ways. Firstly, industries that use coal as an input within Australia will have to pay through some means for their emissions, so there will be reduced demand for the product. At the start of the new arrangements, many pollution intensive industries will receive assistance through the jobs and competitiveness program, which will greatly reduce this effect. Industry assistance will slowly phase out, which gives businesses time to develop clean technologies.

3.39 The main effect will be on a small number of 'gassy' mines that have higher levels of methane emissions, also termed fugitive emissions, which are released from coal seams during mining. A small number of mining companies will need to pay for these emissions. The great majority of mines are not gassy and so emissions from the actual process of mining are small and these mines will be largely unaffected by the legislation. Coal exports per se will not be affected because the burning of the coal and the emissions will occur overseas and will not be covered.

3.40 The Government has recognised that gassy mines will require some transitionary assistance. It has allocated $1.3 billion over six years in its coal sector jobs package. If the package were not implemented, the average gassy mine would face a cost of $25 per tonne of coal produced at a $23 carbon price. The package will reduce this to $1.40 per tonne of coal produced. Assistance will be capped, based on production in 2007-08 and 2008-09, and will cover up to 80 per cent of fugitive emissions beyond a 0.1 tonne of CO_2-e emissions per tonne of coal produced. This system will give gassy mines an incentive to reduce their emissions.[31]

3.41 The industry has made a number of statements that an emissions trading scheme will place it at a considerable disadvantage. The Australian Coal Association stated in evidence:

> Our industry notes that the carbon tax is an $18 billion impost on the coal industry and it means that the industry ends up paying, under this particular construct, for about two-thirds of the estimated $25 billion worth of wealth transfer to households, renewables and agriculture. The specific exclusion of the black coal industry from qualifying for trade exposed industry status is an unjust and unfair treatment of the coal industry. That in

31 Australian Government, *Securing a clean energy future: The Australian Government's Climate Change Plan*, 2011, pp. 133-34 <http://www.cleanenergyfuture.gov.au/wp-content/uploads/2011/07/Consolidated-Final.pdf> viewed 30 September 2011.

> particular is a fundamental flaw that we see in the bills which the committee is considering. The primary issue is that the carbon tax will undermine the industry's international competitiveness ...[32]

3.42 The Association is particularly concerned about the price on fugitive emissions.[33]

3.43 In June this year, the Australian Coal Association released a report by ACIL Tasman, which used survey data of coal mines to project the impact of an emissions trading scheme on black coal mining. The report's key findings were that such a scheme would cost the industry $18 billion in the first nine years and put 4,000 potential jobs at risk (that is, reduce future growth) in the first three years.[34]

3.44 The statements by the Association and the findings by ACIL Tasman overlook important facts. For example, the ACIL Tasman report does not consider whether an emissions price will give an incentive to advances in technology.

3.45 Technical change is constantly occurring and is an important feature of economic growth. The committee asked the Construction, Forestry, Mining and Energy Union (CFMEU) how it expected companies operating gassy mines to react to the legislation:

> I see every sign that once we get past the initial lobbying, outcries and all that sort of stuff, they will release all their accountants and engineers on reducing their costs just like they always do—and they are very good at it. The Australian mining industry is the best at innovating. I fully expect them to work hard to reduce their liability to the maximum extent and that would be a good thing.[35]

3.46 The CFMEU also noted that half a dozen gassy mines are already burning released methane gas to generate power and income and that they expect more mines to do so in future.[36] The Australian Coal Association

32 Mr John Pegler, Australian Coal Association, *Committee Hansard*, Melbourne, 27 September 2011, p. 64.

33 Mr John Pegler, Australian Coal Association, *Committee Hansard*, Melbourne, 27 September 2011, p. 65.

34 Australian Coal Association, 'Carbon tax impact could close coal mines within three years', *Media Release*, 14 June 2011, <http://www.australiancoal.com.au/resources.ashx/MediaReleases/101/MediaRelease/5AEAF2DE9A42B36E1251939D0C47109B/14_June_ACA_Release_ACIL_Tasman.pdf> viewed 30 September 2011; ACIL Tasman, *Impact of Proposed Carbon Price on Black Coal Mining*, 10 June 2011 <http://www.australiancoal.com.au/resources.ashx/Announcements/56/DocumentFile/ABC9A4EF07C0D09A302F121340D5D2A1/ACA_Report_10_06_11.pdf> viewed 30 September 2011.

35 Mr Tony Maher, CFMEU, *Committee Hansard*, Sydney, 28 September 2011, p. 5.

36 Mr Tony Maher, CFMEU, *Committee Hansard*, Sydney, 28 September 2011, p. 5.

requested in evidence that the legislation be amended to only apply to fugitive emissions once the technology was developed.[37] However, this overlooks the point that an emissions price will be a key incentive for industry to develop abatement technologies on a commercial scale. If the Association's approach were implemented, then the technology will probably take much longer to develop.

3.47 Finally, the industry overlooks that it is receiving substantial public assistance to adapt to the legislation through the $1.3 billion coal sector jobs package. More widely, the industry is also receiving assistance through the carbon capture and storage programs. The Government launched the Global Carbon Capture and Storage Institute in 2009 to accelerate the deployment of carbon capture and storage technology globally. Total Australian Government funding for the Institute out to 2016-17 is $305 million. The Government has also established the carbon capture and storage flagships program to support industrial scale demonstrations of carbon capture and storage technology. The Government has made $1.68 billion available under the program.[38]

3.48 The committee can only conclude that the Australian Coal Association is seeking to inflate the effects of the legislation as a means of increasing government assistance when it has already secured a very suitable group of programs. The committee considers that the coal industry has received a balanced package that will give it an opportunity to make the transition to emissions trading. The coal industry cannot plausibly argue that it requires more attention ahead of other sectors of the economy within climate change policy.

Certainty for business

3.49 Although many countries and regions are moving to pricing emissions, this will not be sufficient of itself to provide incentives to developing clean technologies within Australia. Passing the bills will provide certainty for business and will allow firms to start pricing risk and determining which investments provide a sufficient return over the cost of capital. Pacific Hydro stated in evidence:

37 Mr John Pegler, Australian Coal Association, *Committee Hansard*, Melbourne, 27 September 2011, p. 5.

38 Department of Resources, Energy and Tourism, 'Global Carbon Capture and Storage Institute', <http://www.ret.gov.au/resources/gccsi/Pages/default.aspx>viewed 5 October 2011; Department of Resources, Energy and Tourism, *Carbon Capture and Storage Flagships Program,* p. 1, <http://www.ret.gov.au/energy/Documents/cei/ccsfp/CCS_Fact_Sheet.pdf> viewed 5 October 2011.

> Without the legislation and a price, they do not know how to price that risk so they do not invest. If they can price the risk, they will invest.[39]

3.50 Westpac, which has the core function of pricing risk and deciding whether to invest in projects, strongly supports the legislation for its ability to reduce uncertainty and allow the Australian economy to keep pace with the rest of the world:

> Failure to implement an effective and comprehensive policy response which includes a price on carbon as a key foundation stone will increase the amount of regulatory uncertainty currently hindering investment in clean technology and the structural adjustments required to decarbonise the Australian economy. This is part of an inexorable global market trend. There is no competitive advantage to Australian businesses to maintain the status quo.[40]

3.51 This potential for investment is not hypothetical. A leading law firm, Baker and McKenzie, advised the committee that a great deal of investment is pending the passage of the bills:

> The committee should not underestimate how much money is basically on hold at the moment and how much investment in the renewable sector, in carbon offsetting and in some of the green infrastructure is all contingent on this legislation passing—as well as the negotiation of long-term hire-purchase agreements. A lot of the economy which operates in those sectors is pretty much on hold, waiting for this legislation to get through.[41]

3.52 Regulatory certainty has many aspects. It applies to the future as well as to the present. Comments have been made in political debate that the legislation might be repealed at a later date.[42] A Parliament cannot bind a future Parliament through legislation, so repealing the bills is clearly possible as a matter of law. However, the costs of so doing are high. Firstly, such action would hold Australia back from joining the rest of the world in clean technologies and a clean economy.

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39 Mr Andrew Richards, Pacific Hydro, *Committee Hansard*, Melbourne, 27 September 2011, p. 56.

40 Westpac, *Submission 12*, p. 10.

41 Mr Martin Wilder, Baker and McKenzie, *Committee Hansard*, Canberra, 26 September 2011, p. 54.

42 The Sydney Morning Herald, 'Abbot vows to repeal carbon tax', 28 February 2011, <http://www.smh.com.au/environment/climate-change/abbott-vows-to-repeal-carbon-tax-20110228-1bar8.html> viewed 1 October 2011.

3.53 Secondly, it would reduce Australia's standing as a place in which to invest. The committee heard evidence from the wind energy sector that Australia's regulatory certainty helps offset our lack of scale in international markets:

> One of the strong points that Australia has in any investment platform—and I was in banking for a number of years—is certainty. Australia is always seen by international investors as a market that has regulatory certainty. It is one of our strongest platforms in investment. We do not have the scale and cannot compete with the scale of renewables in China or the USA or parts of Europe. Why companies like us are here in Australia, and we have been here for seven years and we have invested nearly three-quarters of a billion dollars, is because of regulatory certainty.[43]

3.54 The Australian national economy is highly reliant on its external sector. From 2008-09 to 2010-11, foreign direct investment in Australia was $48 billion, $40 billion and $37 billion respectively. These sums compare with our GDP in 2010-11 of approximately $1.3 trillion, which means that Australia receives between 3 to 4 per cent of its GDP annually in foreign direct investment.[44] Repealing the clean energy future package would place some of this investment at risk and would reduce our current and future output, while at the same time exposing us to the risk of trade related sanctions at a future date.[45] Repealing the package is not a credible option.

Community understanding of the reforms

3.55 The committee received submissions and correspondence and heard evidence that suggest a widespread lack of understanding about the nature of and potential liabilities under the mechanism.

3.56 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

43 Mr Brett Thomas, Acciona, *Committee Hansard*, Melbourne, 27 September 2011, p. 52.

44 Australian Bureau of Statistics, *Balance of Payments and International Investment Position,* Cat. No. 5206.0, September 2011, p. 27; Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product,* Cat. No. 5302.0, September 2011, p. 21.

45 Ms Meghan Quinn, Treasury, *Committee Hansard*, Canberra, 26 September 2011, pp. 7-8.

implementation of public policy, it is also a matter for concern, given the intended commencement of the mechanism on 1 July 2012.

3.57 In particular, the committee is aware that three sectors affected by the mechanism appear to require a great deal more information to understand the implications of the mechanism for them: small and medium-sized businesses, the agricultural sector and local governments. The particular issues concerning these sectors are addressed in more detail in Chapter 4.

3.58 The committee is aware of the Government's efforts to explain the reforms to the Australian people generally and to specific business and other groups, through approved government advertising, the Clean Energy Future website (www.cleanenergyfuture.gov.au) and the work of DCCEE in conducting workshops and discussions with businesses, local councils, farmers and others, and with their advisers.

3.59 The role of the Clean Energy Regulator will be critical in the effective establishment of the mechanism and related reforms, which will necessarily include considerable effort in working with those who will be liable under the mechanism.

3.60 The committee also notes that clause 295 of the Clean Energy Bill 2011 provides that the functions of the Clean Energy Regulator include, among other things:

- promoting compliance with the clean energy legislation;
- conducting and coordinating education programs about the clean energy legislation and emissions trading schemes;
- advising and assisting persons and their representatives about compliance with the clean energy legislation;
- advising and assisting persons and their representatives about the steps that can be taken to avoid liability for a unit shortfall charge; and
- collecting, analysing, interpreting and disseminating statistical information about the operation of the clean energy legislation.

3.61 The committee is also aware of some fundamental misconceptions about the operation of the mechanism, which are addressed below:

- The mechanism does not create a broadly-based tax payable by individual taxpayers along the lines of the Goods and Services Tax or income tax. The mechanism creates a price on greenhouse gas emissions which is borne by those entities which produce the emissions. The added cost to those entities of emitting greenhouse gases

is then either absorbed or passed on to consumers of the goods and services they produce.

- The mechanism does not, except in some limited circumstances, apply to the purchasers of energy or energy intensive services, and so large users of energy, or consumers of energy-intensive services (such as transport or heating) are generally not liable entities under the mechanism. Rather, the cost of these services will reflect the inclusion of the price on greenhouse gas emissions, and liability will rest with the supplier of those services.
- The mechanism only creates compliance obligations for persons who are directly liable under it and those that may assist them in compliance.
- The changes to the fuel tax system apply an equivalent carbon price to the use of liquid transport fuels in specific sectors, by reducing the fuel tax credits available to businesses. This uses the existing regulatory framework.
- The powers of the Clean Energy Regulator to take enforcement action are limited in their application to people who have obligations under the legislation.
- The bills do not contain provisions which would prevent the future repeal or alteration of the mechanism. While there may be considerable practical and policy challenges in repealing or fundamentally altering the legislation after the commencement of the mechanism, a Parliament cannot bind its successors through provisions in the bills, unless the Constitution provides otherwise.

3.62 In some cases, these issues are addressed in more detail in Chapter 4.

Conclusion

3.63 Australia has had a long and extensive debate on how best we will meet our international commitments to reduce greenhouse gas emissions. Australia has committed to reduce its total greenhouse gas emissions by between 5 per cent and 25 per cent from 2000 levels by 2020. This international commitment is accepted and supported by all major Australian political parties, and reflects an acceptance of the scientific evidence underpinning the need for global action to address the impacts of human-induced climate change.

3.64 The Clean Energy bills will implement a market-based mechanism and complementary reforms to meet Australia's international commitments.

3.65 The committee heard evidence about the importance of establishing the least-cost mechanism to meet its international commitments, and the serious and long-term consequences of delay to the Australian economy, but also directly to Australian citizens.

3.66 In particular, there are potentially serious consequences of further delay for investment in Australia's energy sector, both in terms of ensuring Australia's ongoing energy security and in the direct and significant costs to Australian consumers of further delaying much needed infrastructure investment. There are also many new opportunities for accessing cleaner energy sources in many different contexts, which will be opened up through the adoption of a price on greenhouse gas emissions.

3.67 The committee is aware of, and received evidence about, the claimed impacts on Australian businesses of the implementation of the mechanism and related reforms. Some of these views were positive and constructive, reflecting an optimistic outlook for an Australian economy which places a price on the emission of greenhouse gases and which endeavours to minimise the role of government in determining the shape and direction of future business activity.

3.68 Other views were more pessimistic, suggesting the potential for the mechanism to harm Australian businesses when international efforts to reduce greenhouse gas emissions appear uncertain and because it is a time of global economic uncertainty and our own economy is experiencing some specific transitions. For these reasons, it was suggested to the committee that the bills should either not be implemented or be delayed.

3.69 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.

3.70 Australia has committed to reducing its own greenhouse emissions by between 5 per cent and 25 per cent below 2000 levels by 2020 and is obliged to take action to meet this commitment. International efforts take different forms, and different countries are adopting measures appropriate to their particular circumstances. The mechanism and related reforms have been designed to suit Australia's circumstances.

3.71 Australians are rightly conscious of the broader economic context in which reforms take place. However, the claim that significant economic reforms should be delayed to take account of current circumstances is one

which could be made at any time and for many differing reasons which suit the interests of those making such claims.

3.72 The relevant consideration for governments in undertaking reforms should be whether the reform over time will benefit the Australian economy as a whole and whether the costs of further delay will only serve to increase future costs to be borne by the Australian people.

3.73 The bills contain measures designed to mitigate the transitional effects on those parts of the Australian economy and society most exposed to them, including through the jobs and competitiveness program, assistance to coal-fired electricity generators, specific assistance measures for businesses, communities and others and household assistance.

3.74 While some may have specific concerns about the appropriateness and adequacy of these measures as they may apply in specific circumstances, they reflect a necessary balance between the need to ensure that any disadvantages are minimised, while at the same time ensuring the transition can occur as efficiently as possible.

3.75 The committee notes that, in the case of the jobs and competitiveness program and the assistance to generators, the detail of these measures is still being designed, and that many of the views received, particularly from business, reflect this fact.

3.76 Taking into account the evidence before it, including the comprehensive modelling prepared by the Treasury, the committee believes that the positive outcomes flowing from commencing the shift to a low-emissions economy considerably outweigh the transitional costs of doing so.

3.77 In the committee's view, the bills implement the least-cost option to meet Australia's obligations to reduce greenhouse gas emissions through a market-based mechanism, while also providing transitional assistance to Australian households, businesses and others as the economy adjusts over time to cleaner and more efficient energy sources.

Recommendation 1

3.78 **The Senate and the House of Representatives pass the following bills:**

- **the Clean Energy Bill 2011;**
- **the other 17 bills in the clean energy package; and**
- **the Steel Transformation Plan Bill 2011.**