

# Chapter 3

## Key Issues

The Federal Government's Energy White Paper ... fails to account for the true costs of conventional energy generation. The Paper does not regard key aspects of Australia's national interest including achieving a diverse energy mix, use of indigenous renewable sources, energy security and deep cuts to our greenhouse gas emissions by 2050.<sup>1</sup>

3.1 As with most issues which involve the sometimes competing aims of industry and the environment, opinion on the EWP has been strongly divided. The Coal Association,<sup>2</sup> the National Farmers Federation,<sup>3</sup> and the Energy Supply Association of Australia<sup>4</sup> commended the EWP on its release, seeing the economic benefits for their industries and for the future of Australia's fossil fuel resources. The Business Council of Australia was supportive of the EWP on the basis that it 'would go a long way towards delivering long-term energy security and competitive energy costs for Australia'.<sup>5</sup>

3.2 Professor Bob Carter, Professor of Geology at James Cook University, expressed strong support for the EWP as 'excellent decisions with strong economic and environmental benefits', and dismissed criticisms:

... other public reaction has consisted of shrill criticism. The criticism rests partly on naked self-interest, and partly on an utterly inadequate understanding of the realities of climate change science and of the art of government for the welfare of all.<sup>6</sup>

3.3 However, numerous other industry bodies and most environmental groups were less supportive of the EWP, seeing the Government's energy policy as another opportunity lost in the development of alternate energy sources and in Australia's global obligation to reduce greenhouse gas emissions.

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1 Hydro Tasmania, *Submission 3*, p. 1.

2 Coal Association, *Energy Statement 2004*.

3 National Farmers Federation, 'Energy statement a major win for farmers', *News release*, NR 61/04, 15 June, 2004.

4 Energy Supply Association of Australia, 'Energy Supply Association welcomes new greenhouse measures', *Media release*, 15 June, 2004.

5 Business Council of Australia, 'BCA welcomes national energy plan' *Media release*, 15 June 2004.

6 Bob Carter, 'Weathering the scaremongers' storms', *The Australian*, 17 June, 2004.

3.4 Professor Ian Lowe, Emeritus Professor of Science, Technology and Society at Griffith University, was equally forceful in his criticism:

The Howard Government's Energy White Paper is a disaster. It does almost nothing to address our urgent energy priorities... Australia's pressing energy issues are a secure supply of transport fuels and reducing greenhouse gas emissions. The White Paper provides no policies to deal with those problems....Instead of providing what the Business Council called "a secure energy future", the Howard Government is lurching backwards into the future with its eyes on the past. History will see this Energy White Paper as a tragic missed opportunity.<sup>7</sup>

### **Overview of submissions to the inquiry**

3.5 The Committee received submissions from the Department of Transport and Regional Services (DoTARS), the Department of Environment and Heritage (DEH) and the Australian Greenhouse Office (AGO). These agencies focussed on issues that relate specifically to changes in fuels, changes to excise arrangements, the reduction of urban pollution from diesel vehicles, environmental impact assessments, marine planning, greenhouse aspects of the EWP (to identify opportunities to reduce greenhouse gas emissions) and renewable energy initiatives.

3.6 However, other submissions, particularly those received in the current parliament, focused on greenhouse gases and renewable energy as key issues that they considered were not adequately addressed by the EWP.

3.7 This chapter discusses the key issues that emerged during this inquiry:

- the impact of renewable energy incentives, including the MRET;
- greenhouse gas emission reductions, including geosequestration and the proposed reduction of fuel excise;
- energy efficiencies, including reduction of energy consumption and carbon trading schemes; and
- research and investment, with particular reference to the Kyoto agreement and research and development.

3.8 The Committee notes that the aim of the Energy Task Force that developed the EWP was to 'assess aspects of energy policy and bring together an integrated, national, long-term approach'.<sup>8</sup> The Department of Environment and Heritage submission continues:

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7 Ian Lowe, 'Energy white paper a missed opportunity', *The Canberra Times*, 18 June 2004.

8 DEH, *Submission 1*, p. 6.

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The primary focus of the process was to ensure that Australia has a sound energy policy footing rather than to develop a new measures package.<sup>9</sup>

3.9 DEH submitted that:

Greenhouse measures are a strong component of the Energy White Paper, and, reflecting the long-term nature of the challenge, focus primarily on reducing the cost of meeting future greenhouse constraints by both promoting low-emissions technology and extending support for renewable energy.<sup>10</sup>

3.10 The EWP, however, was reviewed with some dismay and concern by most submitters, especially those who see the Government's future energy proposals as a blueprint to capitalise on the conventional energy resources of coal and oil at the expense of raising greenhouse gas emissions beyond agreed acceptable levels.

3.11 The Business Council for Sustainable Energy (BCSE) stated that:

... this Energy White Paper signifies that the Federal Government is looking towards carbon capture and storage from coal fired power as the magic pill on greenhouse emissions.<sup>11</sup>

3.12 Greenpeace pointed out that:

... the Government's strategy for reducing greenhouse emissions in the stationary energy sector is dependent on geosequestration proving its viability.<sup>12</sup>

3.13 Furthermore, the EWP is viewed by many as a policy without any clearly defined objectives or pathways by which to reach them. Greenpeace argued:

... a roadmap needs to be developed which sets out how [the agreed emissions] target will be achieved.<sup>13</sup>

3.14 Generally most of the submitters concerned about the EWP claimed that it does little to ensure that Australia's energy industry will be able to reduce the emissions of greenhouse gases by 2020, or indeed, by 2010. They argued that the escalating emissions of greenhouse gases across the world need addressing immediately if the effects of global warming are to be minimized.

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9 DEH, *Submission 1*, p. 6.

10 AGO section of the DEH, *Submission 1*, p. 8.

11 BCSE, *Submission 17*, p. 1.

12 Greenpeace Australia Pacific, *Submission 16*, p. 4.

13 Greenpeace Australia Pacific, *Submission 16*, p. 4.

3.15 According to the BCSE, the longer the delay in starting the process to reduce emissions, the greater the financial and social costs will be<sup>14</sup> when international pressure ultimately forces Australia to act.<sup>15</sup> Renewable Energy Generators Australia Ltd (REGA) warned that these costs will start to escalate once investment incentives for renewable energies are lost, soon after 2007.<sup>16</sup>

### **Impact of renewable energy resources**

#### ***MRET: "The cost of a cappuccino every three months"*<sup>17</sup>**

3.16 The EWP, as discussed in chapter 2, states that the MRET will remain fixed to the year 2020 at 9,500GWh of additional renewable energy generation above the 1997 levels.<sup>18</sup> The EWP rejected the Tambling Report's recommendation that the target be increased to 20,000 GWh by 2020 and beyond:

This target, while providing a subsidised growth path for renewable energy, would impose significant economic costs through higher electricity prices. The Review estimated that implementing its recommendations would double the current projected cumulative economic cost of MRET to over \$5 billion by 2020 in net present value terms. The Australian Government does not believe these costs can be justified.<sup>19</sup>

3.17 The Prime Minister defended the Government's decision not to expand the MRET:

Expanding MRET would impose substantial new costs on the economy and would benefit too few technologies. A better path is to directly promote the development and demonstration of a broader range of low emission technologies and tackle the impediments to the uptake of renewable energy.<sup>20</sup>

3.18 This approach received adverse comment when the EWP was released, and was seen as having significant negative economic, social, environment and health impacts on Australia. For example, the Clean Energy Crisis Meeting Group argued:

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14 BCSE, *Submission 17*, p. 1.

15 The Australian Institute, *Geosequestration*, Discussion Paper 72, p. xii, September 2004, p. xii, website, 31 March 2005 at: <http://www.tai.org.au>

16 REGA, *Submission 12*, p. 2, REGA, *Submission 4*, p. 2.

17 BCSE, *Submission 17*, p. 2.

18 EWP, pp. 26 & 147.

19 EWP, p. 148.

20 The Hon John Howard, Address to National Press Club, 15 June 2004.

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The failure to increase the [MRET], the only measure that drives industry growth for the renewable energy industry, defies international trends, is out of step with community expectations and signals the end of growth for the clean energy industry in Australia.<sup>21</sup>

3.19 Several submissions disagreed with the Government's assessment of the cost of increasing the MRET after 2010. For example, the ACF stated that:

... most studies, except those commissioned by the mining and coal industry and those quoted by the Federal government, indicate only small costs for increasing renewable energy targets. For example McLennan Magasanik Associates forecast that costs due to an increase in target size in 2010 are projected to be some \$180 million per annum with a 5% renewable target. In addition, as the size of the renewable energy industry increases, the costs of renewable energy decrease significantly.<sup>22</sup>

3.20 Hydro Tasmania also disagrees with the Government's assessment, arguing:

The 2003 Charles River Associates Report found that a 5% MRET target would have no change on GDP or employment. The Government's commissioned McLennan Magasanik Associates 2003 Report found that a 5% target would result in an increase in GDP of [only] 0.08%.<sup>23</sup>

3.21 Hydro Tasmania also analysed the cost of the increased MRET proposed in the Tambling Report, and concluded that:

... [it] will result in residential electricity price increases of only 0.5% per year above the current target costs... It is estimated that there would be approximately a \$5 increase per quarter on the average household electricity bill representing an increase of just over 3% per annum (not 27% as claimed by Senator Abetz).<sup>24</sup>

3.22 The Committee notes the results of the study commissioned by REGA and conducted by Charles River Associates to assess the industry and economy-wide impacts of different levels of MRET:

The study found that electricity prices would rise 1% under a 5% MRET (relative to the current MRET) and 2.1% under a 10% MRET. These

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21 Clean Energy Crisis Meeting Group, *Joint response to the Prime Minister's Energy White Paper*, WWF Australia, URL: [http://www.wwf.org.au/News\\_and\\_information/Features/feature10\\_p2.php](http://www.wwf.org.au/News_and_information/Features/feature10_p2.php)

22 ACF, *Submission 15*, p. 20.

23 Hydro Tasmania, *Submission 3*, p. 3. See also BCSE, *Submission 17*, p. 2,

24 Hydro Tasmania, *Submission 3*, p. 3.

percentage increases are small relative to those seen in the wholesale contract market for electricity over recent years.<sup>25</sup>

3.23 The BCSE suggested a series of initiatives designed to achieve significant reductions in emissions, one of which states:

[By] increasing the level of the MRET so that renewable energy's share of electricity generation actually increases, (rather than declining as it will do under current policy), [t]he BCSE estimates that, based on a pass through of \$40/MWh, a target of a real 5% increase in renewables' market share by 2010 would only result in a \$1.53MWh increase in the price of electricity. For the average household electricity bill this would work out to little more than the cost of a cappuccino every three months.<sup>26</sup>

3.24 A number of submissions argue strongly that the MRET must be increased immediately in order that the momentum of investment in renewable energies is maintained beyond 2007; without MRET support investment in renewable industries will rapidly stall. REGA warns that the industry:

... is now looking to overseas markets, as it expects that investment in new domestic projects will either slow down dramatically or cease once the MRET's incentives expire over the next two years.<sup>27</sup>

3.25 On the other hand, the submission from a couple in Victoria applauded the Government's retention of the current MRET, claiming that wind energy should not be encouraged, given the environmental and social damage the industry has done in their neighbourhood.<sup>28</sup>

3.26 The Committee notes that the EWP fails to heed the advice from its own review panel on renewable energies to increase the MRET in the decade 2010 to 2020.

### ***Greenhouse gas emission reductions***

3.27 The Committee notes that more than one organisation expresses concerns that the EWP cannot deliver reductions in greenhouse emissions required to prevent climate change. Greenpeace, for example, referred to Australia's Chief Scientist Dr Robin Batterham calling for a reduction of 50–75% in greenhouse gas emissions by the year 2050,<sup>29</sup> and argued:

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25 REGA, *Submission 4*, p. 3.

26 BCSE, *Submission 17*, p. 2.

27 REGA, *Submission 12*, p. 2.

28 Mr Ian and Mrs Trixy Allott, *Submission 9*, p. 1.

29 Greenpeace Australia Pacific, *Submission 16*, p. 2.

It appears likely that net greenhouse emissions will continue to increase under the measures in the energy white paper. They will certainly not put us on a pathway to delivering the deep cuts in greenhouse emissions necessary to protect Australia from climate change.<sup>30</sup>

*Geosequestration: the 'magic pill' on greenhouse emissions?*

... the BCSE is concerned that this Energy White Paper signifies that the Federal Government is looking towards carbon capture and storage from coal fired power as the magic pill on greenhouse emissions.<sup>31</sup>

3.28 The Committee notes that most submissions saw problems in the Government's principal reliance on the capture of greenhouse gases from coal-fired generators for reducing CO<sub>2</sub> emissions. Greenpeace argued that geosequestration cannot be applied to current power stations and that furthermore, there appears to be no certainty that future coal-burning power generators can be built to capture greenhouse gas emissions, let alone transport and store the gases cheaply and safely.<sup>32</sup> The EWP itself refers to 'significant challenges':

... in separating carbon during electricity generation processes, combining carbon dioxide capture and storage in an electricity generation context, ensuring long-term storage and meeting competitive requirements for reliability and cost. Demonstrating the commercial applicability of these technologies is likely to be expensive and take at least 10 years.<sup>33</sup>

3.29 The BCSE also argued that geosequestration will be costly, and warned: To be placing all our eggs in this particular basket seems to be an incredibly risky gamble.<sup>34</sup>

3.30 Greenpeace was similarly concerned about the risk of relying on geosequestration to reduce greenhouse gas emissions:

... the Government's dependence on geosequestration is a high risk strategy given the significant risk that it could fail to achieve one or more of technical, commercial or environmental viability and does not follow a prudent risk management approach, which would employ a suite of abatement measures.<sup>35</sup>

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30 Greenpeace Australia Pacific, *Submission 16*, p. 3.

31 BCSE, *Submission 17*, p. 1.

32 Greenpeace Australia Pacific, *Submission 16*, p. 18.

33 EWP, p. 143.

34 BCSE, *Submission 17*, p. 1.

35 Greenpeace Australia Pacific, *Submission 16*, pp. 4 & 18.

3.31 Similarly, AusWEA submitted:

The EWP's focus on fossil-generation is accompanied by the belief in the future of carbon capture and sequestration technologies to abate these CO<sub>2</sub>e emissions. However, these technologies are unproven in the context of stationary energy generation, and their costs widely disputed. They are also not expected to be developed and available for implementation until the middle of the next decade – by which time Australia's levels of greenhouse emissions will be significantly higher. Conversely, the immediate role that commercially available renewables can play in the overall reduction of greenhouse gases is being denied through the exclusion of a future for this industry.<sup>36</sup>

3.32 The Committee was told that there is not a single operational coal-fired power plant in the world, even at pilot level, that sequesters its greenhouse emissions.<sup>37</sup>

3.33 The ACF doubts the ability of geosequestration to deliver the necessary greenhouse gas reductions. Even if coal-based carbon capture and storage proves environmentally, technologically and economically viable:

... an independent report [The Australian Institute, Discussion Paper 72, September 2004] assessing its role in Australia's energy future estimates it may only reduce Australia's electricity emissions by less than 2.5% to 2030. It found that extensive energy efficiency improvements, combined with use of gas and renewable energy, could reduce electricity sector emissions to 2030 by more than ten times as much as geosequestration alone.<sup>38</sup>

3.34 The ACF is also concerned about the problems of waiting for the geosequestration difficulties to be overcome:

... while geosequestration may have a role in reducing Australia's emissions in the longer term, waiting for its large-scale application still means that in order to meet strong climate protection targets, Australia's emissions would have to be reduced by unrealistically large amounts in future decades.<sup>39</sup>

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36 Australian Wind Energy Association, *Submission 5*, p. 1. Professor Ian Lowe also argued in June 2004, 'The rhetoric is I think dishonest. It suggests that coal, that geosequestration of carbon is a proven technology you can rely on, whereas wind and solar are unproven. In fact the opposite is the case.' See Professor Ian Lowe, *Energy Statement 2004*, Earthbeat, Radio National, Transcript, Saturday 19 June 2004, available at <http://www.abc.net.au/rn/science/earth/stories/s1135187.htm>.

37 BCSE, *Submission 17*, p. 3.

38 ACF, *Submission 15*, p. 10.

39 ACF, *Submission 15*, p. 10.

3.35 Greenpeace also warned of potential environmental dangers of geosequestration:

Clearly, if the sequestered greenhouse emissions leak back into the atmosphere, then geosequestration will have failed as a climate policy because the leaked emissions will cause more global warming. In addition if the leakage is rapid it can asphyxiate humans and animals in the vicinity.<sup>40</sup>

3.36 Discussion and evidence presented to the Committee on the amount of emission reduction facing Australia in the decades to come if there is further delay in setting reduction targets is explored further in chapter 4.

3.37 The ACF also raised concerns that investment in geosequestration will not occur unless a price is set on greenhouse emissions through either an emissions trading scheme or a carbon levy.<sup>41</sup> This issue is also explored further in chapter 4.

#### *Fuel excise reductions and LPG*

3.38 As discussed in chapter 2, the EWP outlines the Government's proposals to implement a major program of reform to modernise and simplify the fuel excise system.<sup>42</sup> Some explanation on the purpose of the excise credits arrangement was given by DEH:

Fuel excise has been demonstrated not to be a driver of fuel usage. The Bureau of Transport and Regional Economics examined the elasticity of transport fuels and found that it is low – price fluctuations do not have a significant impact on demand... The new measures outlined in the White Paper providing conditional access to excise credits provide an incentive to the owners and operators of high polluting diesel vehicles to have their vehicles tested in accordance with the Diesel NEPM and maintained.<sup>43</sup>

3.39 The Committee notes the removal of \$1.5 billion in fuel excise, in particular on diesel. Given that lowering prices could be expected to increase consumption, concerns were expressed that greenhouse emissions would increase as a direct result. Mr McGlynn from the Australian Greenhouse Office told the Committee:

The analysis looked at a range of issues. The original analysis indicated that there was the potential for those changes to lead to some increase in emissions, and that is why some of the complementary measures that were

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40 Greenpeace Australia Pacific, *Submission 16*, p. 17.

41 ACF, *Submission 15*, p. 22.

42 EWP, p. 93.

43 DEH, *Submission 1*, p. 4.

put into the package were put in place—in terms of air quality, the conditionality for heavy vehicles; in terms of greenhouse, the requirement for large excise users to join the greenhouse challenge.<sup>44</sup>

3.40 The Committee notes that these 'large excise users' (using more than \$3 million of excise credits per year) will be required to demonstrate effective management of their greenhouse gas emissions as a member of the Greenhouse Challenge program<sup>45</sup> - a single point of entry to provide information to industry on energy use and emissions and meant to:

... deliver 13.2 Mt of abatement in 2010 which has helped more than 700 Australian companies identify and act on emissions abatement opportunities while saving money and increasing product quality.<sup>46</sup>

3.41 The Committee appreciates the need to achieve low levels of particulate emissions, and recognises that modern diesel engines and diesel fuels contribute to particulate emission reduction.<sup>47</sup> In relation to vehicle emissions, the Committee heard that the EWP:

... sets out new requirements to encourage the owners and operators of high-emitting, heavy diesel vehicles to reduce exhaust particulate emissions and other pollutants to acceptable levels. It also has incentives to make sure vehicles meet the emission standards set under the diesel national environmental protection measure. Starting from 1 July 2006, heavy diesel trucks and buses will need to satisfy one of five emission performance criteria to establish that the vehicle is not likely to be a high polluter in order for the user to be eligible for excise credits as part of the road user charging arrangements set out.<sup>48</sup>

3.42 In relation to monitoring compliance of diesel vehicles with those emission standards, Ms Mackie from DEH told the Committee:

We looked at increasing the measure, but we decided to go with just these criteria because, over time, diesel fuel is becoming cleaner and the fleet is turning over. So, over time, the problem of the very high emitters in the

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44 Mr Gene McGlynn, Australian Greenhouse Office, *Committee Hansard*, Canberra, 4 August, 2004, p. 4.

45 EWP, p. 147.

46 EWP, p. 139.

47 DEH, *Submission 1*, p. 4.

48 Ms Lynelle Briggs, *Committee Hansard*, Canberra, 5 August, 2004, p. 9.

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diesel fleet is sorting itself out. We wanted to keep this measure relatively simple.<sup>49</sup>

3.43 The Committee notes, however, that while the proposed EWP excise credit system targets the emissions of particulates from the burning of diesel,<sup>50</sup> it does not contribute to CO2 emission reductions.

3.44 The Committee is concerned that, while the 90 000 households across Australia that use heating oil and kerosene<sup>51</sup> for heating will become exempt from current excise, those households using cleaner LPG for heating will incur the new excise that is to be phased in from 1 July 2006.<sup>52</sup>

3.45 The Australian Liquefied Petroleum Gas Association Ltd (ALPGA) was concerned that the EWP outlines proposals to remove the excise on off-road business usage of diesel and petrol in two stages, and thus reduce costs of these fuels to end users. The EWP states:

The changes will lower compliance costs, reduce tax on business and remove the burden of excise from thousands of individual businesses and households... All fuels used off-road for all business purposes will become excise-free over time.<sup>53</sup>

3.46 In response ALPGA argues that:

This policy change will erode the competitive position of LPG across the whole industry and cause an initial loss of 33% of commercial and industrial LPG business as current LPG customers to switch from LPG to other fuels, primarily imported diesel, with a consequent increase in air pollution and greenhouse gases.<sup>54</sup>

3.47 The Committee notes that the ALPGA is currently assisting the Government to create additional policy initiatives to alleviate the impacts that excise reduction on diesel and petrol will have on the LPG industry.<sup>55</sup> The ALPGA seeks to establish a joint industry/government working group to develop a range of positive policy

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49 Ms Kathleen Mackie, Department of Environment and Heritage, *Committee Hansard*, Canberra, 4 August, 2004, p. 34.

50 EWP, p. 103.

51 EWP, p. 99

52 EWP, Table 1, p. 96.

53 EWP, p. 93.

54 ALPGA, *Submission 7*, p. 1.

55 ALPGA, *Submission 7*, p. 1.

solutions, which include, among other initiatives, investigating options for using LPG as an electricity generation fuel and increasing the use of LPG in rural and regional Australia.<sup>56</sup>

3.48 The Committee also recognises that off-road diesel and petrol emissions are significantly higher than the greenhouse gas emissions from liquid petroleum gas,<sup>57</sup> and that using these fuels rather than LPG will contribute to overall increases in greenhouse gas emissions in Australia. Figures supplied by the ALPGA indicate that the rise will be significant; an estimated initial loss in 2008 of about 7.9 petajoules sales of LPG would result in an extra 20,000 tons of CO<sub>2</sub> released into the atmosphere, rising to 80,000 tons per annum by 2012.<sup>58</sup>

3.49 The Committee notes that the BCSE is concerned that the EWP does not acknowledge the role LPG can play in CO<sub>2</sub> emission reduction. One initiative that would reduce emissions at little cost would be:

... encouraging greater use of natural gas in energy generation. [C]ombined cycle gas turbines and gas fired co-generation generate electricity with a third to a half of the emissions from the coal-fired power that is used to generate the vast majority of Australia's electricity. These gas technologies are used in a large number of countries around the world, where they generate substantial quantities of reliable, continuous electricity. There is nothing in the White Paper that encourages the use of natural gas for electricity generation.<sup>59</sup>

### **Energy efficiency**

3.50 The EWP bases much of its proposals to reduce greenhouse gases on energy efficiencies.<sup>60</sup> As shown below, many submissions expressed concern that the EWP will fail to deliver these technologies in time for them to have much impact on abatement levels needed to prevent global warming.

#### ***Reducing Australia's energy consumption***

3.51 As noted in chapter 2, the EWP defines energy efficiency as 'gaining the same or a higher level of useful output, using less energy input',<sup>61</sup> and goes on to say that:

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56 ALPGA, *Submission 7*, p. 2.

57 ALPGA, *Submission 7*, p. 15.

58 ALPGA, *Submission 7*, pp. 10 & 15.

59 BCSE, *Submission 17*, p. 2.

60 EWP, p. 105.

61 EWP, p. 106.

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Energy efficiency is, and will remain, a central element of a cost-effective greenhouse abatement strategy, delivering about 40 per cent of expected energy sector abatement in 2010.<sup>62</sup>

3.52 The Committee notes that the EWP does not define the term 'cost-effective' nor what figure is given to the 'expected' energy sector abatement, as used by the EWP. Without this figure, the 40% abatement claim is not measurable; an important omission, given that energy efficiency is a central element of the Government's abatement strategy.

3.53 Several submissions pointed out that, as Australia delays in facing the problem of escalating greenhouse gas emissions, the cost to rectify the problem in future decades will increase substantially.<sup>63</sup>

3.54 The Committee acknowledges the need for these efficiencies in the energy industry, but has some reservations, in the light of evidence presented during this inquiry, that '40% of expected energy sector abatement' will mean very much in 2010. The ACF, for example, stated that the largest source of emissions is from the energy sector:

... and these emissions are spiralling out of control. Between 1990 and 2010 energy sector emissions are expected to increase by over 40%. The energy sectors' heavy reliance on coal-fired electricity makes Australia the highest per capita emitter of greenhouse gasses in the industrialised world.<sup>64</sup>

3.55 The Committee notes that significant energy efficiencies can be achieved using technologies that are available now, but that there are other factors that need to be addressed for these efficiencies to be realised. This point is explored further in chapter 4.

#### *Carbon trading scheme*

3.56 The EWP mentions briefly the concept of a carbon trading scheme, but only in the context of a possible future strategy:

Australia will not impose significant new economy-wide costs, such as emissions trading, in its greenhouse response at this stage. Such action is premature, in the absence of effective longer-term global action on climate change.<sup>65</sup> ... Should such an effective global response be in prospect, the

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62 EWP, p. 105.

63 Greenpeace Australia Pacific, Submission 16, pp. 4ff; BCSE, *Submission 17*, p. 3; REGA, *Submission 12*, p. 2.

64 ACF, *Submission 15*, p. 8.

65 EWP, p. 25.

government will consider least-cost approaches to constraining emissions. This consideration would encompass the possible introduction of market-based measures (such as an emissions trading scheme) in the longer term, noting the potential for these to lead a better resource allocation and provide industry and individuals with the greatest flexibility in determining how best to respond.<sup>66</sup>

3.57 The Committee notes, however, that the emissions trading scheme was raised in many of the submissions. For example, the ACF stated that:

Direct emission reduction policies such as taxes, emissions trading schemes and emission reduction targets can encourage “learning-by-doing” as companies are forced to undertake actions to reduce emissions that they would not otherwise undertake. As the company gains experience with such actions they can discover ways to bring costs down through the discovery of new products, processes and management systems.<sup>67</sup>

3.58 The Committee notes also that the state Premiers have very recently set in motion the first steps towards developing a carbon trading scheme across Australia.<sup>68</sup> The ACF was quick to comment:

By putting a price on carbon we are sending a signal to the marketplace that continuing to pump greenhouse pollution into the atmosphere is bad for the environment, our health and our economy... A well designed emissions trading scheme will help reduce greenhouse pollution by encouraging industry to reduce emissions and invest in clean technologies such as solar and wind power. It will help unlock Australia's innovative spirit and create thousands of jobs in new clean industries.<sup>69</sup>

3.59 Emissions trading was mentioned in other submissions in relation to the Kyoto Protocol and the concerns expressed about the absence of Australia's ratification.<sup>70</sup> The next section discusses these concerns.

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66 EWP, p 149.

67 ACF, *Submission 15*, p. 12, REGA, *Submission 4*, p. 2. On emissions tax, see also Mr Erwin Jackson, ACF, *Committee Hansard* 18 March 2005, p. 9.

68 *The Australian* newspaper, 31 March 2005.

69 ACF, *Media Release*, 31 March 2005, at:  
<http://www.acfonline.org.au/asp/pages/document.asp?IdDoc=2358>

70 REGA, *Submission 12*, p. 2, Greenpeace, *Submission 16*, pp. 5 & 6.

## ***Research and investment***

### *Kyoto: Opportunities lost*

3.60 Some submissions were critical of the Federal Government's refusal to ratify the Kyoto Protocol on CO<sub>2</sub> emissions, which they argued was an essential step if Australia is to reduce emissions through investment in the renewable energy industry.<sup>71</sup> The Kyoto Protocol's Flexibility Mechanisms established the carbon markets which have created opportunities for investments in emission reduction technologies and abatement projects, investments only available to Kyoto signatories. As REGA pointed out:

This market is already operating, with direct linkage to the European Union's Emissions Trading Scheme. Point Carbon estimates that the value of the global emissions trading market by 2010 will be worth in excess of \$AUS53 billion.<sup>72</sup>

3.61 As noted in chapter 2, the EWP states, however, that the Government is convinced that ratification is not in the national interest:

The Kyoto Protocol does not provide the basis for an effective long-term response as it does not include all of the largest emitters in the world, nor does it include a pathway for addressing developing countries, whose emissions will soon overtake those of industrialised countries.<sup>73</sup>

3.62 Greenpeace questioned the real reason for the government's refusal to ratify:

Greenpeace believes the Kyoto Protocol *does* provide a global framework required for meeting long-term objectives and its effectiveness depends on the political will of governments.

The [Federal] Government equates the Kyoto Protocol with the first commitment period, which is incorrect as the clear intention throughout the Kyoto negotiations has been that there would be subsequent commitment periods with progressively greater emission reduction targets and the involvement of developing countries. The Government is fully aware of this, having been part of the negotiations.

This, combined with the fact that the Government has deliberately sought, during negotiations, to weaken the Protocol and refuses to ratify, despite studies, (including one commissioned by the Government,) which show it would be cheaper for Australia to meet our Kyoto target if we ratified ... lead[ing] Greenpeace to believe that the Government's primary reason for

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71 REGA, *Submission 12*, p. 2.

72 REGA, *Submission 12*, p. 2.

73 EWP, p. 24.

opposing the Kyoto Protocol is because it contains mandatory targets for reducing greenhouse emissions.<sup>74</sup>

3.63 The Committee also notes the ACF's concerns about the lost opportunities in Australia of not ratifying the Kyoto protocols:

Kyoto ratification would ... send a powerful signal across the Australian community, to business and industry, and the international community, that Australia was prepared to act decisively to secure Australia's economic, social and environmental prosperity. Allens Consulting Group recently concluded:

having renounced Kyoto the Commonwealth Government is less able to influence the emerging global framework and, as a major fossil fuel exporting country, to provide some measure of international leadership.<sup>75</sup>

3.64 The Committee also heard that the curbing of projected increases in Australian greenhouse emissions since 1990 was due to the reduction in land clearing over the period. The EWP:

... acknowledges that the reason Australia's greenhouse emissions haven't risen significantly in the period 1990-2002 is because the large increase (34%) in emissions from the stationary energy has been almost completely offset by significant declines in land use emissions. This reduction in land use emissions is a one off saving and does not do anything to address the major sources of greenhouse emissions in Australia – stationary energy and transport.<sup>76</sup>

3.65 A similar view was expressed by the ACF:

The principle reason that Australia is on track to meet the Kyoto target is due to large reductions in emissions from [reduction in] land clearing.<sup>77</sup>

### *Research and development*

3.66 As outlined in chapter 2, the EWP places much importance on research and development, for example, through allocation of \$500 million for the Low Emissions Technology Demonstration Fund for renewable and fossil fuel technologies, \$75

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74 Greenpeace, *Submission 16*, p. 20.

75 ACF, *Submission 15*, p. 17.

76 Greenpeace, *Submission 16*, p. 10.

77 ACF, *Submission 15*, p. 8.

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million for the Solar Cities project, \$14 million for wind forecasting and \$100 million for the Renewable Energy Development Initiative.<sup>78</sup>

3.67 However, the Committee notes that many submissions were very critical of the EWP's emphasis on research and development. For example, the ACF stated:

The government's approach thus far has been to concentrate on research and development. R&D into new technologies is required, but this should not be used as an excuse for delay on other fronts.<sup>79</sup>

3.68 The BCSE was also clearly concerned that the EWP avoids facing the issue of emission reduction and instead resorts to research,<sup>80</sup> leading to delay, and warned:

Delay has its costs, which was the one of the most important findings from the recent Avoiding Dangerous Climate Change Conference held recently in Exeter in the UK. The conference reported that a 20 year delay of action could result in required rates of emission reductions 3-7 times greater than that required for a more immediate response to the same temperature target. This kind of 20 year delay is exactly what this Energy White Paper appears to be.<sup>81</sup>

3.69 The BCSE also claims that greater government spending on research and development to lower emissions from energy use is absolutely essential but insufficient.<sup>82</sup> Other submissions also criticised the EWP in that funding for research is, in the end, very costly without the adoption of other, more important, measures. For example, the ACF stated that:

... to reduce greenhouse gas emissions in the most cost-effective way, two broad types of climate policy are required – technology incentives (such as R&D) and direct emission policies (such as targets, emissions trading schemes or carbon levies). Focusing on only one of these options is likely to be very costly, as reiterated by the Intergovernmental Panel on Climate Change, which concluded that, in general, a R&D subsidy by itself does not offer the least-cost approach to reducing carbon emissions.<sup>83</sup>

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78 As summarised in the EWP, p. 3.

79 ACF, *Submission 15*, p. 22.

80 BCSE, *Submission 17*, p. 1.

81 BCSE, *Submission 17*, p. 1.

82 BCSE, *Submission 17*, p. 1.

83 ACF, *Submission 15*, p. 12.

3.70 Given that the EWP proposes that only \$300 million of its \$1 billion budget will be given over to renewable energies<sup>84</sup> and a total of \$700 million will be available for the Low Emissions Technology Development Fund, the Committee noted that some submitters are concerned that the fund will be used to fund fossil fuel technologies.

3.71 The Committee received some suggestions from various groups on ways to address research and investment for Australia's future energy needs. Greenpeace recommended that the Government:

- Remove direct and indirect subsidies which encourage the use of fossil fuels;
- Increase funding for renewable energy, energy efficiency and demand side management;
- Put a price on greenhouse pollution – either through a revenue neutral carbon levy and/or a national emission trading scheme designed to deliver genuine emission reductions, with stringent emission caps reduced over time and which does not exempt any emitters nor grandfather permits to them.<sup>85</sup>

3.72 The Committee acknowledges REGA's comments about research and development of renewable energies:

The heavy reliance on technology development is important but [the government] fails to acknowledge that Australia has already developed world-leading zero emissions technology and it fails to give credit and encouragement to the major achievements of the renewables industry. The White Paper does not solve the problem of getting this technology, or the technology that it proposes to fund, into the Australian electricity market.<sup>86</sup>

3.73 The Western Australian Sustainable Energy Association (WASEA) also supports the claim that the renewable energy industry is well developed and ready to contribute more to the reductions of greenhouse gas emissions:

The White Paper wrongly implies that the Australian renewable energy industry is still at the infancy stage and ignores the fact that we have a world class photovoltaic and solar water heater industry.<sup>87</sup>

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84 EWP, pp. 26 & 31.

85 Greenpeace Australia Pacific, *Submission* 16, p. 5.

86 REGA, *Submission* 4, p. 2

87 WASEA, *Submission* 14, p.2.

3.74 The Committee notes that a submission from Tarwin Valley Coastal Guardians (TVCG) in Victoria pointed out that the claim by the wind industry that sufficient subsidy will create a local manufacturing centre has not proven to be the case, and that the planned production in Portland in Victoria of four bladed wind generators will now go to China.<sup>88</sup>

3.75 TVCG also saw little benefit in the continuation of wind turbine development, citing figures to demonstrate that there are better cost-efficient renewable energy sources than wind energy. TVCG warned that:

... the retail cost of wind energy offered by most suppliers is some 35% more expensive than that of traditional generation.<sup>89</sup>

3.76 REGA pointed out that the Australian industry has not been assured by the Federal Government that it will be able to participate in the opportunities presented through the carbon markets, and that:

The White Paper offers no framework to provide confidence to future investors in either renewable energy projects or fossil fuel projects to calculate what the risks and benefits from future carbon pricing regimes will be.<sup>90</sup>

3.77 The Committee also notes that the BCSE argued that the EWP lacks incentive for investment in the renewable energy industry. There are, according to the BSCE, a number of technologies available now that could achieve significant reductions in emissions from energy without imposing a major impost upon the economy, and:

... the analytical work undertaken in the development of the National Framework indicates that energy consumption in the manufacturing, commercial and residential sectors could be reduced by 20–30% with the adoption of current commercially available technologies with an average payback of four years.<sup>91</sup>

3.78 The Committee notes with some concern the statement from REGA, in arguing the case for supporting renewable energy development in Australia, that:

... the world leading photovoltaic silicon thin film technology developed by the University of New South Wales will now be produced in Germany with the production facility and market entry incentives available there. The White Paper's failure to provide any further incentives to address this level

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88 Tarwin Valley Coastal Guardians, *Submission 8*, p. 2.

89 Tarwin Valley Coastal Guardians, *Submission 8*, p. 2.

90 REGA, *Submission 12*, p. 2.

91 BCSE, *Submission 17*, p. 2.

of competition will see Australia losing jobs and investment in projects here and run the very real risk of buying back our own technology in the future when forced to do so by international climate change obligations and world trade.<sup>92</sup>

3.79 The Committee is aware that this technology is being further developed and marketed in Germany, backed by the German Government, with a target production of 100,000 rooftops by the end of 2005. The International Energy Agency (IEA) states that:

... the EEG [Renewable Energy Sources Act], together with the '100 000 Rooftops Solar Electricity Programme,' are the driving forces for the development of the German PV market.<sup>93</sup>

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92 REGA, Submission 4, p. 3.

93 IEA Photovoltaic Power Systems Programme at <http://www.oja-services.nl/iea-pvps/ar03/deu.htm>.