

## Chapter 3

### Employment Impacts and Costs of Delay

#### Employment Impacts

3.1 Modelling undertaken by McLennan Magasanik Associates (MMA) suggests that over 20,000 jobs will be created in the renewable energy sector due to the RET.<sup>1</sup>

3.2 The MMA study:

...estimated that these renewable energy projects could create more than 25,000 jobs including 15,000 construction jobs, 2,500 new permanent positions and 8,600 indirect jobs in supporting sectors. The significant proportion of these jobs would be in rural and regional Australia.<sup>2</sup>

3.3 A study by Access Economics for the Clean Energy Council concluded:

The RET combined with energy efficiency delivers about 28,000 net jobs in Australia to 2020, and the majority of those from the renewable energy industry.<sup>3</sup>

3.4 Pacific Hydro note:

...research undertaken by the Climate Institute found that if all renewable energy projects currently in the development pipeline were pursued, 26,000 jobs would be created in Australia.<sup>4</sup>

3.5 Other groups have also referred to the employment benefits from the RET:

In Australia, the renewable energy industry currently employs about 10½ thousand people directly. If the target is brought into place with the extension as planned, we expect to have 25,000 to 30,000 jobs by 2020, and even more after that.<sup>5</sup>

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1 Ms Meghan Quinn, Treasury, *Proof Committee Hansard*, 5 August 2009, p 10.

2 Department of Climate Change, Answers to questions on notice, August 2009.

3 Mr Matthew Warren, Chief Executive Officer, Clean Energy Council, *Proof Committee Hansard*, 5 August 2009, p 69. In the original source, Access Economics say 'in aggregate, Access Economics estimates that the climate change policies assessed for this report will create a net 28,230 FTE positions over the period 2010 to 2020'; Access Economics, *The Net Employment Impacts of Climate Change Policies*, p ii.

4 Pacific Hydro, *Submission 8*, p 1.

5 Dr Muriel Watt, IT Power, *Proof Committee Hansard*, 6 August 2009, p 52.

...renewable energy projects will deliver...26,000 jobs throughout rural and regional Australia...<sup>6</sup>

...renewable energy projects are twice as employment intensive as, say, the fossil fuels sector.<sup>7</sup>

3.6 The MMA study provided estimates of the impacts of the RET at a state level. The state hurt most is Victoria (a plausible result given their reliance on brown coal) while the main gainers are Tasmania (presumably benefiting from their hydro power) and South Australia (with vast geothermal resources).

3.7 Another study by MMA projects employment gains by state (Table 3.1).

**Table 3.1: Employment gains by state (thousands, FTE)**

	Peak construction jobs	Ongoing
NSW/ACT	4.1	0.8
Victoria	3.6	0.8
Queensland	0.9	0.5
Western Australia	1.4	0.4
South Australia	3.8	0.8
Tasmania	1.3	0.5

Source: McLennan Magasanik Associates, *Regional Employment and Income Opportunities Provided by Renewable Energy Generation*, May 2009, pp 9, 11. <http://www.climateinstitute.org.au/images/MMAreport.pdf>.

3.8 Some studies try to go further and analyse the impact on jobs at a sub-state level. However, experts warned the Committee of the biases often inherent in modelling at this level due to the unavailability at sub-state level of much of the required data:

...one of the issues with disaggregating below a sub-state level in Australia is that it does not take account of any abatement opportunities that will be generated in the future. So, by definition, the analysis that you have before you does not include any jobs from the renewable energy sector that do not exist today... these subregional economic analyses are biased. They suggest that there will be more job losses than would be reasonable if we were able to do general equilibrium analysis.<sup>8</sup>

...if you are looking to use a computable general equitable modelling tool to form a quantitative estimate of the amount of jobs created at below the

6 Hydro Tasmania, *Submission 40*, p 7, citing McLennan Magasanik Associates, *Regional Employment and Income Opportunities Provided by Renewable Energy Generation*, May 2009.

7 Dr Karl Mallon, World Wildlife Fund, *Select Committee on Climate Policy Hansard*, 1 May 2009, p 49.

8 Ms Meghan Quinn, Treasury, *Proof Committee Hansard*, 5 August 2009, pp 10 and 12.

state level then the current tools in Australia are not able to produce that modelling...<sup>9</sup>

3.9 Again, the Committee was presented with a range of modelling results. Many studies claiming large adverse impacts on overall economic activity are 'worst case' scenarios, as they assume away the extent to which a smaller increase in activity by one company frees up capital, finance and labour and thereby allows a larger increase in activity by another company.

### **Real wage impacts**

3.10 Contrary to the impression sometimes given, modelling by both Treasury and for the Minerals Council projects that real wages continue to grow with or without the RET, and with or without the CPRS. The increase is modestly smaller under some scenarios than others but under no scenarios do real wages fall.

3.11 Another assertion is that wages in renewable energy will be lower than in emissions-intensive energy generation. Treasury explained that in the absence of any compelling evidence, there is no reason to think this is true:

Economic theory and data would suggest that real wages generally grow in line with productivity and the level of real wages generally reflects the productivity of labour. So industries with high labour productivity, which are typically capital intensive industries, have higher real wages than other lower capital intensive industries. So it depends very much on what you mean by green jobs versus other types of jobs, and there is a very imprecise definition there. Renewable energy industries tend to be very capital intensive, so theoretically you would expect the level of real wages in those industries to be quite high.<sup>10</sup>

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9 Mr Blair Comley, Department of Climate Change, *Proof Committee Hansard*, 6 August 2009, p 93.

10 Ms Meghan Quinn, Treasury, *Proof Committee Hansard*, 5 August 2009, p 25.

## Costs of delaying the RET legislation

3.12 Many submissions were received from the renewables sector, especially the solar energy area, referring to the potential damage to the industry, and its job potential, if the RET legislation is delayed:<sup>11</sup>

A draft RET bill was produced in December 2008, and the bill finally entered the parliament in June 2009. It was deferred by the Senate a few days later...The price of renewable energy certificates fell sharply immediately following the Senate's deferral of the bill. Orders for solar PV have evaporated, and staff are now being laid off or are idle in clean energy companies across an industry which is supposed to be gearing up to deliver 20 per cent of Australia's electricity in 11 years time.<sup>12</sup>

...the delay that is coming about from the legislation is delaying those projects that, at this time of the global financial crisis, could be delivering new employment opportunities and new projects to Australia right now.<sup>13</sup>

...many of our customers have indicated that they will be forced to lay off workers if the renewable energy target legislation is not introduced before October.<sup>14</sup>

There is currently a massive amount of pent-up investment in the renewable energy industry which continues to await the safe passage of the RET legislation. While Australia's renewable energy projects are on hold, countries like China and the United States and those in Europe are charging ahead with clear incentives and long-term policy certainty for their renewable energy sectors.<sup>15</sup>

3.13 Some investors outside the industry took a similar view:

The RET provides investors with the clear rules they need in order to invest in renewable energy generation in Australia in the short to medium term. Without an expanded RET in place, investments in new renewable energy

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- 11 In addition to the those quoted below, similar sentiments were expressed in submissions such as Todaye, *Submission 5*; Solar Co, *Submission 12*; Solaris Technology, *Submission 71*; Greenback Environmental, *Submission 88*; Silcar, *Submission 90*; Belling Solar, *Submission 95*; Great Southern Solar, *Submission 98*; Sun Empire Solar Systems, *Submission 99*; Eureka Funds Management, *Submission 102*; Australian Sugar Milling Council, *Submission 104*; Kyocera Solar, *Submission 105*; RF Industries, *Submission 106*; Suzlon Energy, *Submission 107*; Vestas, *Submission 129*; Solar Shop, *Submission 130*; Clean Energy Council, *Submission 112*; Solahart Lismore, *Submission 24*; Jason Sharam, *Submission 34*; Conergy, *Submission 44*; Origin Energy, *Submission 53*, p 2; Modern Solar, *Submission 121*, p 1; Air Solar Bundaberg, *Submission 4*, p 1; Solar-Wind-Systems, *Submission 1*, p 1; Pacific Hydro, *Submission 8*, p 1.
- 12 Mr Matthew Warren, Chief Executive Officer, Clean Energy Council, *Proof Committee Hansard*, 5 August 2009, p 67.
- 13 Professor Ray Wills, CEO, Western Australian Sustainable Energy Association, *Committee Hansard*, 2 July 2009, pp 2-3.
- 14 Ms Andrea Gaffney, BP Solar, *Proof Committee Hansard*, 6 August 2009, p 50.
- 15 Mr Kane Thornton, Hydro Tasmania, *Proof Committee Hansard*, 6 August 2009, p 50.

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projects will not proceed, causing a delay in Australia's transition to a low-carbon economy.<sup>16</sup>

3.14 The sugar industry, who will be able to generate power from the currently wasted bagasse by-product, was also keen to avoid further delay:

We support the national renewable energy legislation framework as it is proposed. We support the proposed penalty price and we want to see the overall scheme design and structure remain as it is. We do not want to see it revisited.<sup>17</sup>

3.15 They emphasised the benefits the RET could bring to regional Queensland:

We are talking about regional energy security and generating electricity close to the regional communities that are using that power. We are talking about regional employment security for the existing jobs in the sugar industry and generating new employment during project construction, many jobs that are currently under pressure from some of the resources downturn in recent times. More money in the sugar industry has flow-on for regional communities dependent on the local sugar industry, from millers, growers, harvesters, suppliers and contractors all putting money back into regional economies.<sup>18</sup>

3.16 The impact of the delay has been quantified:

Since the legislation was referred to this Committee in late June, the market price of a Renewable Energy Certificate (REC) has dropped from around \$52 to around \$38. That price impact is not only damaging the business case of every proposed renewable energy investment in Australia, but it is also being felt in the revenue streams of companies that have made existing renewable energy investments. One estimate puts the dollar value of this most recent delay at \$165 million, with much more damage to be felt unless the legislation is passed soon.<sup>19</sup>

A survey of CEC members reveals the delay is costing the industry at least \$2 million a week.<sup>20</sup>

3.17 There were some submissions from households seeking clarity so they could decide whether to install solar panels:

We have been trying to find out about installing solar PV panels to help electricity generation in a small domestic way. But nobody can tell us what the rules will be from July 1st. !!!..Please expedite the design, and approval

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16 Investor Group on Climate Change, *Submission 119*, p 1.

17 Mr Dominic Nolan, Chief Executive Officer, *Proof Committee Hansard*, 6 August 2009, p 38. See also Australian Sugar Milling Council, *Submission 104*, p 2.

18 Mr Dominic Nolan, Chief Executive Officer, *Proof Committee Hansard*, 6 August 2009, p 38.

19 Vestas, *Submission 129*, p 4.

20 Clean Energy Council, *Submission 112*, p 2.

of a scheme that will work, enabling thousands of householders to contribute to power generation and the reduction of greenhouse gasses.<sup>21</sup>

I call on politicians of all parties to pass legislation that gives some certainty to people wanting to purchase solar power systems.<sup>22</sup>

3.18 This was often expressed in the context of the need to replace the home solar rebate.<sup>23</sup>

## **Business Certainty**

3.19 There is a lot of discussion in the context of an ETS about providing certainty to business. This can also be an argument for complementing an ETS with a RET:

...we should be relying primarily on price measures, so to that extent a renewable energy target is a backup measure...there is a fair bit of price uncertainty so it gives investors in that [renewable energy] sector some of the certainty that they like—that there will be some demand for their product even if, for example because of the financial crisis, it turns out easier to meet the [emissions] target...<sup>24</sup>

## **Arguments for the RET other than climate change**

3.20 The RET has mainly been justified on environmental grounds. However, it could be argued for on energy security grounds. While Australia is a net energy exporter, it is a net oil importer, and a large gross importer of oil. Building up the renewable energy industry would reduce this dependence on foreign energy suppliers.

3.21 The role that renewable energy could have in energy security has been raised in the context of biofuels:

The potential exhaustion of Australia's domestic oil reserves within 7 to 8 years and our growing dependence on imported oil pose yet untended challenges. Protecting the fuel market from including the active development and use of renewable and gaseous alternative fuels as

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21 Rob & Sandra Willis-Jones, *Submission 70*, p 1.

22 Roger McMillan, *Submission 33*, p 1.

23 For example, Paul & Margaret O'Brien, *Submission 75*, p 1; Rob and Leonie Zadow, *Submission 82*, p 1; Meredith McKenzie, *Submission 120*; David Murray, *Submission 28*; Tina Donovan, *Submission 36*; and Mary-Anne Naumann, *Submission 38*.

24 Professor John Quiggin, *Proof Select Committee on Climate Policy Hansard*, 28 April 2009, p 23.

transition fuels from oil dependence is not in the interest in promoting genuine future transport energy security and climate change.<sup>25</sup>

3.22 Diversifying energy sources also has the potential to reduce the vulnerability of the economy to disruptions to large single facilities or pipelines. A recent such incident was as the Varanus Island explosion.<sup>26</sup>

3.23 Renewable energy not only provides greater certainty about the availability of power, but also about its cost:

The one key advantage of renewables over, say, coal or gas is that, once the asset is built, the fuel cost is zero. There is sun, there is wind: the fuel cost to the operator is zero. So it is a certain cost in the sense that when you build it you know what energy you are likely to get out of it and you know that the fuel cost is effectively zero. It is very different for proponents of new gas and coal fired generators, where for those fuel costs they are increasingly going to be looking towards international export market parity.<sup>27</sup>

### **Committee view**

3.24 The committee heard evidence relating to the impact that the RET will have on employment. The committee accepts the results of modelling for the Treasury which indicates that the RET will have a significant positive impact on employment in the renewables sector. The committee is concerned that delay in the passage of the legislation could jeopardise these opportunities.

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25 Quote from Renewable Fuels Australia to the Select Committee on Climate Policy, Submission 16, page 3.

26 See Senate Standing Committee on Economics, *Gas Explosion at Varanus Island*, Western Australia, December 2008.

27 Mr Tim Nelson, AGL Energy, *Proof Committee Hansard*, 6 August 2009, p 57.

