

## **Dissenting report by Labor Senators**

1.1 Labor senators do not support the chair's report.

1.2 This inquiry presented a unique and timely opportunity to articulate a clear policy vision for Australia's energy future. Labor senators are concerned that the Chair's report fails to fully grasp this opportunity.

1.3 Although we believe it fairly and accurately sets out much of the evidence received by this committee, Labor senators emphasise different elements and reach different conclusions.

1.4 We do not consider it productive to document each of the areas of disagreement with the Chair's report. Instead, this dissenting report will set out our views on the evidence that has been received by this committee.

### **Climate change threatens the resilience of Australia's electricity network**

1.5 It is not proposed to exhaustively prove that climate change is real. That task has already been ably completed by decades of scientific research and countless government and intergovernmental commissions. The existence of anthropogenic climate change is uncontroversial in the scientific community. It should be likewise in our politics. The challenge now is how best to respond.

1.6 The fact of climate change poses two distinct challenges to the resilience of Australia's energy network.

#### ***The challenge of a warming world***

1.7 Climate change poses risks to physical infrastructure. As the CSIRO explained, '[b]oth historical climate observations and climate projections into the future indicate that the frequency and intensity of many extreme weather events are on the rise'.<sup>1</sup>

1.8 It is difficult to establish the role of climate change in any particular weather event. Nonetheless, the weather events that lead to black outs and load-shedding in the last twelve months illustrate the vulnerability of electricity infrastructure to the types of events that we can expect more frequently in a warming world.

1.9 On 8 February 2017, there was a heatwave across much of Australia. The high summer temperatures translated into high electricity demand in South Australia. An unexpected drop in wind generation coincided with numerous forced outages of thermal generators (including two that reduced capacity due to high ambient temperatures and one that was not allowed to bid into the market). The shortfall was

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1 Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Submission 23*, p. 3.

transferred across South Australia's interconnectors, which threatened to trip interconnector limits. As a result, AEMO enacted load shedding.<sup>2</sup>

1.10 On 10 February 2017, the eastern states continued to experience a heatwave, translating into high electricity demand in New South Wales. At the same time, technical faults took a number of thermal generators offline. As a result, AEMO enacted load shedding for a large commercial user in New South Wales.<sup>3</sup>

1.11 On 28 September 2016, tornadoes damaged a number of transmission lines in South Australia. The damage to these lines caused them to trip, and set off a cascade of faults that triggered protective features in a number of wind turbines as well as the Heywood Interconnector, taking them offline. As a result, the entire state lost power for several hours.<sup>4</sup>

1.12 These events are not one-offs. Instead, the evidence to the committee was that network assets would increasingly face these types of physical challenges.<sup>5</sup> Despite this, the committee also heard from transmission and distribution companies that there was limited guidance from the AER about what investment should be undertaken to protect against climate change risk:

**Senator McALLISTER:** So no definitive position [from the AER] about whether or not climate risk ought to be incorporated in your planning framework?

**Mr Vincent:** That is correct.<sup>6</sup>

1.13 Labor senators are concerned by this vacuum, and consider the AER has a key coordinating role (see **Recommendation 1** below).

### ***The challenge of a low carbon future***

1.14 As well as physical risks, climate change also poses economic and regulatory risks to carbon emitting generating assets. Australia will need to transition away from carbon intensive electricity generation if we are to satisfy our international commitments and make an effective contribution towards addressing climate change.

1.15 Coal provided around 63 per cent of Australia's electricity in 2014-15.<sup>7</sup> It also produced 88 per cent of the total emissions from electricity generation.<sup>8</sup> It is well

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2 Australian Energy Market Operator, *System Event Report – South Australia, 8 February 2017*, p. 3.

3 Australian Energy Market Operator, *System Event Report – New South Wales, 10 February 2017*, p. 1.

4 Australian Energy Market Operator, *Black System - South Australia 28 September 2016 – Final Report*, p. 6.

5 Mr John Bradley, Chief Executive Officer, Energy Networks Australia, *Committee Hansard*, 10 February 2017, p. 30.

6 *Committee Hansard*, 10 February 2017, p. 42. See also evidence by Mr Rainer Korte, Executive Manager, Asset Management, ElectraNet, *Committee Hansard*, 10 February 2017, p. 34.

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understood and acknowledged amongst industry that this mix is not sustainable. AGL and Engie gave evidence to this committee that they were 'moving out of coal'.<sup>9</sup> The Clean Energy Finance Corporation explained that 'it would be very difficult to find a private sector or a commercial investor making a decision to invest in a coal fired power station in the Australian market today'.<sup>10</sup>

1.16 The committee's hearings took place against a background of public discussion by the Australian government of public investment or subsidies for new coal fired power stations. Labor senators believe it would be inappropriate, uneconomical, and unsustainable for this to occur. Australia's energy future must rest more heavily on renewable and low carbon energy sources (see **Recommendation 2** below).

### **The need to replace out-of-date infrastructure gives Australia the opportunity to transition to cleaner energy sources**

1.17 Australia is due for a round of investment in energy infrastructure. This need arises independently of the demands of climate change — instead it is a consequence of the age and capabilities of existing plants.

1.18 Many of Australia's generating assets are near or at the end of their design life. The dirtiest plants are also amongst the oldest. These generators would have to be replaced irrespective of the need to respond to climate change.

1.19 Australian's energy consumption patterns are also changing, putting new demands on the electricity network. Changes in lifestyles and technologies have transformed the way that electricity is consumed. The uptake in use of air conditioners has moved periods of peak demand from winter to summer. The uptake in the use of rooftop solar has meant that there is lessening demand in the middle of the day. The committee heard that:

The generation mix and market rules in Australia have not been designed to meet this kind of demand profile, so the resilience of the electricity infrastructure will continue to deteriorate if measures are not put in place to address this problem quickly.<sup>11</sup>

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7 Australian Government, Department of Industry, Innovation and Science, Office of the Chief Economist, *Australian Energy Update*, October 2016, p. 18.

8 Australian Government, Climate Change Authority, *Policy Options for Australia's electricity supply sector: Special review research report*, August 2016, p. 15.

9 Mr Jim Kouts, Head of Corporate Affairs, ENGIE in Australia, *Committee Hansard*, 20 February 2017, p.18. See also Mr Richard Wrightson, General Manager, Wholesale Markets, AGL Energy Limited, *Committee Hansard*, 7 March 2017, p. 6.

10 Mr Oliver Yates, Chief Executive Officer, Clean Energy Finance Corporation, *Committee Hansard*, 10 February 2017, p. 40.

11 Mr Robert Riebolge, Chief Network Analyst, 1414 Degrees, *Committee Hansard*, 20 February 2017, p. 21.

1.20 The need to respond to replace aging infrastructure and manage Australia's changing demand patterns presents an opportunity to invest in assets that meet the shared need to reduce carbon. This investment would have to occur irrespective of climate change — Australia has the chance to transition to cleaner energy sources at the same time.

### **Australia has the technology to make this transition now**

1.21 There is a wealth of existing and emerging technologies that would enable Australia to meet these needs. These technologies include different renewable generation and energy storage options. We also draw particular attention to demand management technologies, which are often forgotten in discussion about future energy networks.

1.22 It is not proposed to explain these technologies in this dissenting report, as the descriptive portions of chapter 3 of the chair's report set them out in considerable detail. We note, however, that these technologies are at different stages of development and commercialisation. Ongoing government support is required for them to be integrated fully into the NEM, and deliver benefits to Australians. This support should be provided (see **Recommendation 3** below).

1.23 Labor senators acknowledge that renewable technologies have a different profile from fossil fuel generators. In particular, there are issues arising from wind and solar being intermittent and asynchronous sources of power.

1.24 There have been some suggestions by public commentators that these issues mean that government should act to limit the penetration of renewables. We do not believe this is a satisfactory response.

1.25 Different generating and storage technologies have their own set of benefits and liabilities. This is equally as true for older technologies as it is for the new. As was explained to the committee by way of anecdote:

This term 'baseload' is appropriated and elevated to some particular level as if it has some intrinsic value. Baseload, per se, is not useful. In my ceiling in my house, when I changed the insulation some years ago, I had a look at my old water heater, which is a big, thin-steel container, exposed to an uninsulated roof, and I inquired as to why this was such a wasteful device. The answer is that the coal-fired generators in Victoria had a minimum stable generation level. They were baseload. They could not operate other than flat-out, and to keep them going they had to soak up their generation at night. They were inflexible.<sup>12</sup>

1.26 The state electricity markets (and later the NEM) developed market rules and structures to accommodate the strength and limitations of previous generating technology. As technology changes, so too must the market. Labor senators believe that market rules should be adjusted to reward market participants for providing ancillary services that contribute to the grid stability and reliability that the public expects (see **Recommendation 4** below.) In practice this may mean, for instance,

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12 Mr Bruce Mountain, Director, CMF, *Committee Hansard*, 7 March 2017, p. 67.

separate markets for storage to complement renewables and smooth out intermittency, or for the provision of inertia.

1.27 Labor senators also believe that market rules should be adjusted to recognise and reward the new types of benefits that emerging technologies are capable of delivering. The committee heard from a number of witnesses that the current settlement period for prices of 30 minutes meant that the NEM was unable to reward the ability of batteries to provide very fast dynamic primary frequency response.<sup>13</sup> This, the committee was told, acts as a disincentive to the provision of batteries.

1.28 Likewise, the committee was told of regulations that may discourage consumers from purchasing home batteries:

**Mr Osbourne:** The biggest selling battery in the market is the Tesla Powerwall. It is a very nice looking thing...If you read some of the non-binding installation standards that have been published, you are required to put that in a cage...

**Senator URQUHART:** So what is the purpose of the cage?

**Mr Osborne:** It is to stop people touching it.<sup>14</sup>

1.29 Labor senators believe that, where it is safe and appropriate, market regulators should seek to lower the regulatory barriers to entry to new technologies and put in place appropriate rules to incentivise investments that contribute to the security, reliability and affordability of the NEM (see **Recommendation 5** below.)

## **The need for national leadership to manage the transition to renewables**

### ***The path to decarbonisation***

1.30 It is rare to conduct an inquiry where almost every witness is in agreement. This was such an inquiry. The committee heard from witness after witness that the failure of the Australian government to articulate a plan to transition to a low carbon future was crippling industry.<sup>15</sup>

1.31 AGL explained that the lifespan of electricity assets required long term planning:

The market participants need time to plan; there are often five to 10 years in planning horizon, and we need some sort of predictability of when to replace assets to avoid the disorderly transition we are currently experiencing today.<sup>16</sup>

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13 See testimony set out at paragraphs 4.40 to 4.56 of the chair's report.

14 *Committee Hansard*, 10 February 2017, p. 16.

15 See testimony set out at paragraphs 4.4 to 4.23 of the chair's report.

16 Mr Douglas Jackson, Executive General Manager, Group Operations, AGL Energy Limited, *Committee Hansard*, 7 March 2017, p. 4.

1.32 That long term planning was not possible given the policy uncertainty that had been created by the government over the last four years. Mr Oliver Yates of the Clean Energy Finance Corporation explained that:

People do not quite know the direction of government policy. People do not know the timing of the need to make adjustments in carbon emissions. People do not know the speed with which that may or may not have to be made. In that environment it is very hard for the private sector to make long-term investment decisions, which are necessary if you are going to move from one type of asset to another type of asset.<sup>17</sup>

1.33 The end result, according to Mr Danny Price of Frontier Economics, has been an 'investment strike' in new electricity infrastructure.<sup>18</sup>

1.34 Labor senators believe that the government should, as a matter of urgency, develop a policy that provides stability, certainty and direction to industry (see **Recommendation 6.**)

1.35 Labor senators consider that there are clear benefits to energy policy being bipartisan and having broad industry support.

1.36 We note that the terms of reference for the Finkel Review enable it to develop a framework for this policy. The Review's report should be made public when it is received, and responded to as soon as possible (see **Recommendation 7.**)

1.37 Labor senators note that senior government ministers have already ruled out adopting an emissions intensity scheme. We consider that an emissions intensity scheme is an appropriate and effective mechanism for transitioning Australia's energy sector to a low carbon future. Industry agrees.

1.38 At the time of writing, notable supporters of an emissions intensity scheme included Snowy Hydro, the Business Council of Australia, BHP, AGL, EnergyAustralia, the National Farmers Federation, Origin Energy, the Australian Energy Markets Commission, the CSIRO, Energy Networks Australia, the Chief Scientist, the Climate Change Authority, the Clean Energy Finance Corporation, as well as numerous state and territory governments.

1.39 Professor Ross Garnaut told the committee that:

...an emissions intensity scheme would serve the purpose of providing appropriate incentives for investment in lower emissions technologies. In fact, as far as the climate change objectives, the emissions reduction objectives, and also the energy investment efficiency objectives are concerned, the emissions intensity scheme is very similar in its merits to carbon pricing.<sup>19</sup>

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17 Mr Oliver Yates, Chief Executive Officer, Clean Energy Finance Corporation, *Committee Hansard*, 10 February 2017, p. 39.

18 Mr Danny Price, Managing Director of Frontier Economics, *Committee Hansard*, 7 March 2017, pp. 29–30.

19 Professor Ross Garnaut, *Committee Hansard*, 7 March 2017, p. 23.

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### *An orderly exit for aging plant and a just transition for workers*

1.40 AGL spoke of the need for 'a market rule that suitably telegraphs the phase-out of legacy power plants'. In their view:

This will enable market participants to plan and invest in the necessary generation and associated infrastructure. It will also minimise the impacts of short-notice periods for closure on wholesale electricity supplies, such as those experienced with the impending closure of the Hazelwood power station and the recent closures of the Northern and Playford coal power stations in South Australia.<sup>20</sup>

1.41 Labor senators believe this is sensible. The regulators of the NEM have a role in coordinating an orderly exit of aging plant, in particular the suite of old coal fired power plants (see **Recommendation 8.**)

1.42 There is a significant informational asymmetry between the owners of aging generators on the one hand, and those who depend on it on the other hand. Adequate notice that an asset is to be retired would help smooth out the 'lumpiness' of investment in infrastructure by providing potential investors with notice of a gap in the market.

1.43 More notice of exit would also provide governments with a better opportunity to protect plant workers, and their communities. The committee was fortunate to hear from Mr Rowbottom, who had worked at the Port Augusta power stations as a mechanical technical officer for 17 years, and subsequently was able to find a role with solar thermal company Repower Port Augusta.<sup>21</sup> Not all workers are able to find a similar path.

1.44 The AMWU in their evidence reminded the committee that 'The Paris Agreement includes a requirement that governments take immediate and specific action to "create decent work and quality jobs for workers that are affected by adaptation to climate change"'.<sup>22</sup> The AMWU and the ETU pointed in particular to the success of the Victorian Government's Latrobe Valley Worker Transfer Scheme.<sup>23</sup>

1.45 The transition from fossil fuels to a cleaner energy future promises benefits to Australia. We should promise a just transition to those adversely affected by it (see **Recommendation 9.**)

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20 Mr Douglas Jackson, Executive General Manager, Group Operations, AGL Energy Limited, *Committee Hansard*, 7 March 2017, p. 2.

21 Mr Gary Rowbottom, Chairperson, Repower Port August, *Committee Hansard*, 20 February 2017, p. 67.

22 Mr Warren Tegg, Economic and Industrial Adviser, Australian Manufacturing Workers' Union, *Committee Hansard*, 7 March 2017, p. 43.

23 Mr Warren Tegg, Economic and Industrial Adviser, Australian Manufacturing Workers' Union, *Committee Hansard*, 7 March 2017, p. 47.

## **Recommendations**

### **Recommendation 1**

**1.46** The AER and AEMC consider reviewing existing policies to ensure transmission and distribution asset owners have clear guidance as to what constitutes prudent investment to protect networks against climate change risk.

### **Recommendation 2**

**1.47** The Government does not provide public financing for new coal fired power plants, noting such public support would not represent value for taxpayer money, violate notions of competitive neutrality and would not be consistent with meeting international emission reduction objectives.

### **Recommendation 3**

**1.48** The Australian government provide ongoing support for emerging energy technologies to overcome technical and regulatory hurdles to entering the market, including continuing to fund the development and commercialisation of these technologies through ARENA and the CEFC.

### **Recommendation 4**

**1.49** The AER and AEMC consider making reforms to the NEM that reward the provision of ancillary services, including services associated with reliability and stability.

### **Recommendation 5**

**1.50** The AER and AEMC consider making reforms to the NEM (where safe) to reduce the technical barriers of entry for new energy technologies, and recognise and reward the new services they are able to offer to the grid.

### **Recommendation 6**

**1.51** The Australian government end the uncertainty about national energy policy, and develop a stable and consistent policy (such as an emissions intensity scheme) that can support investment in new energy infrastructure whilst meeting Australia's international climate change obligations.

### **Recommendation 7**

**1.52** The Australian government commit to making public the report issued by the Chief Scientist (the Finkel Review), and responding to the recommendations as soon as possible.

### **Recommendation 8**

**1.53** In order to avoid chaotic, unplanned closures and their significant impacts on the NEM and affected workers and communities, the Australian Government work with stakeholders, including the AEMC, on a framework to provide for the orderly exit of ageing generators, including options such as requiring market participants to provide adequate notice of their intention to exit.



**Recommendation 9**

**1.54 The Federal Government establish mechanisms to support a just transition for workers and communities resulting from the retirement of aging power generators, including a national framework for worker redeployment schemes modelled on the Victorian Government's Latrobe Valley Worker Transfer Scheme.**

**Senator Jenny McAllister  
Deputy Chair**

**Senator Alex Gallacher**

**Senator Anne Urquhart**

