Australian Greens' dissenting report

1.1 The Australian Greens do not support the majority report, which recommends that the *Clean Energy Finance Corporation Act 2012* (CEFC Act) be amended to remove the prohibition on the Clean Energy Finance Corporation (CEFC) investing in carbon capture and storage (CCS) technologies.

1.2 The CEFC is a clean energy financier, tasked with investing to increase investment in renewable energy, energy efficiency and low emissions technologies.

1.3 The CEFC seeks to make targeted commercial investments, to counter market failures and financing impediments and to generate positive public policy outcomes in the energy sector.

1.4 The CEFC carries out its investment activities while seeking to achieve a target performance in accordance with the Portfolio Benchmark Return and risk profile established in the Investment Mandate.

1.5 So far, the CEFC has committed over $5.8 billion in finance to 85 projects, and has been very successful.

1.6 The Australian Greens are proud of the role we played in establishing the CEFC including the clear directive in the CEFC Act prohibiting support for CCS energy projects.

1.7 CCS is an experimental, largely unproven technology. More than 30 coal power plants with carbon capture have been cancelled or put on hold globally. The flagship $7.5 billion 'Kemper Power Plant' in the United States abandoned initial plans to be a CCS powered coal plant in place of natural gas, due to cost overruns and problems during the construction phase.

1.8 In Australia, over $1.3 billion of taxpayers' money has been spent on CCS technology eliciting no tangible results. A proposed domestic CCS coal plant, ZeroGen, went into administration despite government subsidies of $187 million.

1.9 The prohibitive cost of CCS technology also limits opportunities for its application. It is cheaper to replace coal-fired plants with renewable or hybrid energy systems than to retrofit them with CCS technology. In evidence to the committee Ms Lipski, Environmental Justice Australia stated:

> In amending the CEFC Act to allow the CEFC to invest in CCS, funds from commercial or near commercial clean energy projects would be redirected towards a technology that is unproven and where sufficient doubt exists as to its environmental and economic risks.[1]

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1 Ms Bronya Lipski, Lawyer, Environmental Justice Australia, *Committee Hansard*, 18 April 2018, p. 16.

1.10 In terms of new construction of coal-fired power with CCS, Bloomberg New Energy Finance found that to make back the cost of investment, electricity prices from a new ultra-supercritical coal plant could be as high as $203 per megawatt hour. Some estimates put the global average cost of wind and solar at $55 and $70 per megawatt hour respectively. It is almost impossible to envisage—especially in the absence of a carbon price—that CCS technology would generate a viable return.

1.11 The CEFC's investment mandate prohibits investment in any project that does not reduce emissions by at least 50 per cent. Mr Simon Holmes à Court's submission to this inquiry states it is extremely unlikely that any CCS and coal project will ever be presented to the CEFC that meets this guideline.[2]

1.12 There has been substantial misinformation regarding CCS by its proponents. Mr Holmes à Court summarised the problem during his evidence at the public hearing:

> I am continually disappointed by the truthiness of the proponents of CCS. You've heard claims that there are 19 CCS projects worldwide; yet only two of them are on coal—one in Canada and one in the US. They are small, they were expensive to build and the project owners have chosen not to roll out the technology to the rest of their fleet. Both projects used the captured carbon to extract oil. Any lifecycle assessment of the entire process from capturing carbon to bringing up and burning the extracted oil shows that the projects are actually responsible for an increase in atmospheric carbon. Proponents do not mention the sector's major failures, including the $7.5 billion Kemper project that was scrapped after just 100 hours of operation. A significant portion of the Kemper project will be funded by the residents of Mississippi, the poorest state in the USA.[3]

1.13 There are also unknown consequences of storing gas underground. Scientists have identified risks of soil acidification and erosion associated with this process. Leakage can also occur, undermining the emission reduction benefits. The Australia Institute summarised this problem as follows:

> …a key reason the CEFC shouldn't be investing in power sector carbon capture and storage is that it is not actually low-emission technology. Carbon capture and storage, for example, for a coal-fired power station doesn't actually reduce emissions; it just changes where they go. They go into the ground as opposed to into the sky, and we hope they stay in the ground for a while but we are not exactly sure how long. So, in terms of actually promoting low-emission technologies, that is a key reason as to why the CEFC shouldn't be directing money into power sector carbon capture and storage technologies.[4]

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2 Mr Simon Holmes à Court, *Submission 13*, p. 3.

3 Mr Simon Holmes à Court, *Committee Hansard*, 18 April 2018, p. 23.

4 Mr Roderick Campbell, Research Director, The Australia Institute, *Committee Hansard*, 18 April 2018, p. 1.

1.14 Mr Richard Horton, who was a founding member of the Global Carbon Capture and Storage (CCS) Institute, noted there was 'no certainty that re-injected CO_2 will remain in situ in perpetuity' and that CCS technology 'does not make dirty energy clean; it simply relocates the collected and concentrated pollution'.[5]

1.15 There are also potential direct dangers from the storage of carbon dioxide. Evidence given to the inquiry stated:

> The European Environment Agency recognises leakage and the re-emission of CO_2 as it's stored or transported as a real issue. And if leakage does occur, there is a fatality level in human populations if the level of CO_2 reaches 10 per cent concentration in the air. So there are real issues if these types of projects are located near where people live.[6]

1.16 Evidence to the inquiry made it clear that CCS is an unproven, risky and expensive technology that a taxpayer funded green bank, tasked with accelerating the transition to a clean energy future, should continue to be prohibited from investing in.

1.17 According to Environmental Justice Australia, even with the removal of the prohibition on the funding of CCS, the CEFC could still be in breach of the law if it funded CCS projects:

> Given the known failures of CCS, particularly with regard to fossil fuels, and that the federal government has already lost millions of taxpayer funds to CCS already, investment into such technologies could amount to improper use of public funds under the Public Governance, Performance and Accountability Act, especially if the CEFC were to invest in proposals to retrofit extant coal-fired power stations or contribute to the construction of high-efficiency low-emissions or ultra-supercritical power stations proposals that include CCS. As a corporate Commonwealth entity the CEFC is required under the PGPA Act to promote the proper use and management of public resources. There is an economic and ethical component to the proper use of resources. The CEFC is to have an appropriate and prudent risk management framework. It was set up to invest in a commercial manner and cannot invest money for which it is responsible unless the money is invested in a manner consistent with sound commercial practice.
>
> This bill enables proposals to be put to the board for an uncommercial industry, frustrating its objects, and will most likely lead to a waste of administrative resources. The board acts with the requisite degree of care and diligence in administering its functions. It cannot invest in CCS in the context of the CEFC Act and broader framework. Crudely removing the

5 Mr Richard Horton, *Submission 1*, p. 1 (emphasis omitted).

6 Mr David Barnden, Lawyer, Environmental Justice Australia, *Committee Hansard*, 18 April 2018, p. 22.

> CCS exemption would put directors in an unenviable position liable to upset the requirement for the proper use of government resources.[7]

1.18 Further evidence to the inquiry stated that shifting the CEFC's focus away from clean technologies risks undermining its operations and missing opportunities. Ms Suzanne Harter from the Australian Conservation Foundation explained:

> [I]t's…important to note that the CEFC is a specialised financier. They've already gained a lot of expertise and a reputation around clean energy, and extending that to something like carbon capture and storage would just be a dilution of their current mission, in which they've been very successful in catalysing investment into clean energy. As has already been stated, Australia has an abundance of clean energy resources and a lot of opportunity that is as yet untapped. The CEFC has been investing across solar, wind, bioenergy, storage, pumped hydro and energy efficiency, and across sectors, from agriculture to the building sector. There's a lot of opportunity left for that sort of investment to drive down our emissions. Moving away from that and requiring them to gain expertise in a whole other area that is focused on perpetuating fossil fuels, when we need to be transitioning away from them, would be an inappropriate use of the CEFC.[8]

1.19 Australia has already experimented with CCS technology. According to The Australia Institute, Australia has spent more of its energy RD&D budget on CCS than nearly every other country (peaking at 44 per cent in 2012, with an annual average of 28 per cent). This places Australia first or second among OECD countries every year between 2009 and 2015.[9]

1.20 CCS technologies have not been demonstrated at scale, despite substantial Australian government funding. There are no plants operating at scale in Australia. CCS technology is far from commercial anywhere globally and would require huge policy support, including a carbon price, which we currently do not have.

1.21 Given Australian taxpayers have already lost over $1.3 billion on this failure, it is inconceivable that the government would consider pumping more money into what has proven to be a dead-end.

1.22 The cost of renewable energy is falling rapidly, while CCS remains an unproven, unicorn technology with a poor track record. Every dollar spent on CCS is finance that could be spent on clean, cheap renewable energy that is proven to be commercially viable.

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7 Ms Bronya Lipski, Lawyer, Environmental Justice Australia, *Committee Hansard*, 18 April 2018, p. 16.

8 Ms Suzanne Harter, Climate Change and Clean Energy Campaigner, Australian Conservation Foundation, *Committee Hansard*, 18 April 2018, p. 18.

9 The Australia Institute, *Submission 11*, Attachment 1, p. 16.

1.23 It is clear that this bill is another attempt to maintain a fantasy around 'clean coal' to help prop up the coal industry. As Mr Holmes à Court told the inquiry:

> …it's been gesture politics in order to keep a narrative going that there is a future for coal, but Australia has just closed the 13th power station in five years. In Australia, coal is a dying industry. Each year, the fundamentals get worse. We've got a schedule for closing stations and we're never going to build another one. But it's important for many to have a narrative that coal has a strong future, and CCS is part of that narrative building. I see that the work done to date has been largely around gesture politics.[10]

1.24 Given the climate emergency the world faces, it is clear that focusing on CCS is at best a distraction from the critical task of implementing currently available technology to rapidly transition to a zero carbon economy. At worst, the use of CCS could create a carbon storage bomb that could return large amounts of carbon pollution into the atmosphere in the future.

1.25 Given the history of CCS in Australia and around the world, the Australian Greens recommend the Senate does not pass this bill.

Recommendation 1

1.26 Australian Greens Senators recommend that the bill not be passed.

Senator Richard Di Natale
Leader of the Australian Greens
Senator for Victoria

Senator Janet Rice
Deputy Chair
Senator for Victoria

10 Mr Simon Holmes à Court, *Committee Hansard*, 18 April 2018, p. 25.