This essay will outline three Australian decarbonisation initiatives, paying attention to the ways in which they are communicated, their persuasiveness, and how they may be regarded from different positions on how to respond to climate change.

The initiatives will be considered in light of Zenghelis' contention that decarbonisation requires a "fundamental structural transformation in all economies," (Zenghelis 2016, p.174). Climate change presents a challenge for modern capitalism because "it is caused by carbon, and…capitalism was founded on carbon," and "the global economy is still overwhelmingly dependent on oil, gas and coal," (p.173).

The CarbonNet Project is an initiative working towards establishing a commercial scale Carbon Capture and Storage (CCS) network in Gippsland, Victoria. The website claims CCS is a key climate change mitigation strategy in reducing greenhouse gas emissions from industry (Jobs, Precincts and Regions 2022).

A video embedded in the webpage serves as a persuasive communicative tool. Panoramic views of green pastures, uplifting music, and actors in lab coats, bestow a naturalisation of technology. Here, CCS is promoted as a convincing answer to emissions reduction. The use of buzzwords and visual elements are persuasive communicative techniques which emphasise arguments for technological innovation in the service of neoclassical economic aims.

The project is funded by the Victorian and Commonwealth governments, who are guided by beliefs underpinning neoclassical economics; small government, market driven policy, financialisaton and the individual as a rational economic actor optimising their own interest. CarbonNet typifies the ongoing argument about how Australia decarbonises while adhering to neoclassical principles of growth and profit. It is pro-growth, claiming "investment into the state" and "employment opportunities," (Jobs, Precincts and Regions 2022). It is embedded in a financialised economy where "financial ways of thinking" not only dominate corporate and government decision making, but have infiltrated "work relations…media...and into our homes and life," (Bryan and Rafferty 2018, p.9).

Economists and commentators take different positions on CCS. The Climate Council of Australia characterises it as "a license to pollute", which "will never be a 'zero-emissions' solution, particularly where it's attached to highly polluting coal and gas projects,"(Climate Council 2022). Although economist Ross Garnaut is less demonising of CSS, noting that Australia has "more than its share of low-cost CCS opportunities," (Garnaut 2019, p.109), he also observes that "low-cost opportunities for stopping the increase in fugitive emissions through CCS…have been missed as a result of incoherence in Australian climate policy" (p.128 -129). According to Merzian, CCS technology has failed to meet every major international target despite billions in spending (Merzian 2022). He says "tools are available to keep global warming to 1.5 degrees, but there is little political ambition to meet this challenge," (ibid). The recently elected Labor government has pledged to reduce Australia's emissions by 43% by 2030, but The Climate Council calls to "halve our emissions by 2030, and reach net zero no later than 2035," (Climate Council 2022). Political will to decarbonise is potentially weakened by fossil fuel industry donations to the major parties, which exceeded $1.15 million in 2021 (Mazengarb 2022). A new government does not mean a shift away from CCS and the dominant neoclassical doctrine that has been so successfully incorporated into political, economic and social arenas.

CarbonNet's focus on new technology may be appealing from the position of innovation economists. Zenghelis says "innovation offers the most important route out of the environmental problem... by shifting economies increasingly towards knowledge capital and information-based goods and

services, decarbonisation becomes possible even while growth continues to occur," (Zenghelis 2016 p.177). CarbonNet adheres to innovation economists' idea of decoupling, where "technological progress can…support continued growth in value because the intellectual economy is unbounded," (ibid).

Conversely, green economists such as Cato are more sceptical. Cato identifies "the capitalist economy as *the* source of any environmental problem," (Cato 2011, p.233). She believes "there can be no peace between a capitalist economy and the environment" (ibid). Although, "technological…solutions have an important role to play in easing the relationship between the human community and the planet… they are not a substitute for structural change in the economic model that dominates twenty-first-century life," (p. 230). So, in a capitalist economy, initiatives like CCS are used to generate more growth, but what is needed is "a change in the design of the economy itself," (p.234). While CarbonNet offers a strategy for decarbonisation by embracing technology it remains tied to principles of growth and profit.

The Sustainable Olive Mill Waste Management Project **"**seeks to revolutionise the handling of olive pomace waste in Australia through the implementation of a combination of recycling technologies," (Circular Business Innovation Centre (CEBIC) 2022). It proposes to, "build an industry-first facility to upcycle up to 28,000 tonnes of olive waste each year into new products…[which] will reduce waste and deliver substantial greenhouse gas reductions," (2022).

The initiative is funded by the Circular Business Innovation Centre, a subsidiary of government department Recycling Victoria. The circular economy model is championed by eco modernisation economists among others. According to The Ellen Macarthur Foundation, the circular economy offers "a systems solution framework" to climate change and "gives us the power to grow prosperity, jobs, and resilience while cutting greenhouse gas emissions, waste, and pollution," (The Ellen Macarthur Foundation n.d). Like innovation economics, the circular economy emphases a decoupling of economic activity from finite resources.

Frankel criticises the "Pollyannish optimism" of the circular economy (Frankel 2018, p.140). He says the hope that recycling and re-use through the circular economy can achieve "incredible productivity gains without needing to reduce drastically high utilisation of…material resources" impedes necessary "profound systemic changes," (p.137). He believes that given innovation, decoupling and green growth are being touted by powerful groups suggests "much is at stake," (p.129). Government backed departments like CEBIC, alongside partnering company Cobram Estate, may not necessarily want to tackle decarbonisation at the expense of economic prosperity. Furthermore, these economic arguments are political and always about relationships and negotiation and power.

Innovation economists might welcome the partnership between Recycling Victoria and Cobram Estate as they believe "smart public-private partnerships are the best way to implement policy" over solely market efficiency (Atkinson & Audretsch 2018, p.18). However, Frankel suggests that governments pinning their hopes on large corporations "to achieve decoupling in combination with large research institutes and government departments," overlooks the fact that "corporations are highly unreliable partners with quite mixed agendas," (Frankel 2018, p.145). Thus, economic arguments are never neutral, they have consequences, and attention should be paid to who is speaking in initiatives such as The Olive Mill Project and what their aims for economies and people may be.

Seed is Australia's first Indigenous youth climate network, and aims to build "a movement of Aboriginal and Torres Strait Islander young people for climate justice," (Seed 2022). It hopes for "a

just and sustainable future with strong cultures and communities, powered by renewable energy," (2022). Seed's campaigns include tangible initiatives such as protecting the Northern Territory from fracking, but also more conceptualised notions of Aboriginal and Torres Strait Islander people's knowledge of, and connection to, land.

Seed's plans for decarbonisation focus on knowledge, awareness and listening, and differ from the Anglo-centric policy initiatives discussed earlier. Anglo-centric stories have shaped mainstream arguments about the ways economies should approach decarbonisation. In its application of Indigenous knowledges, Seed exemplifies Ostrom's observation that "neither the state nor the market is uniformly successful in enabling… long-term, productive use of natural resource systems," (Ostrom 1990, p.1). She suggests instead that "communities of individuals have relied on institutions resembling neither the state nor the market to govern some resource systems with reasonable degrees of success over long periods of time,"(ibid). More recently, the 2022 IPCC report aims to be more inclusive and now recognises that "Aboriginal and Torres Strait Islander Peoples can enhance effective adaptation through the passing down of knowledge about climate change planning that promotes collective action and mutual support," (IPCC 2022).

Despite Australia having some of the largest greenhouse gas emissions per person, and "Indigenous Peoples in Australia contributing to the least emissions", they "are among those most affected by the consequences,"(Creamer et al 2022). Frankel suggests that "the ability to decouple economic growth from natural resources is not just an abstract, mathematical problem," and that "business and political decoupling goals are thinly veiled agendas to maintain profound inequality enjoyed by majorities in rich OECD," countries (Frankel 2018, p.129). Seed's approach to decarbonisation takes into account the human repercussions of the social and material consequences of the way economic arguments are communicated by those in power.

It is impossible to separate industrialised economies from colonisation. Moreover, Cato says the "globalized economy was developed from colonial systems that assumed the power vested in the countries who had developed sophisticated technologies gave them a right to a greater share of the earth's resources," (Cato 2011, p.236). She suggests introducing a "heterodoxy into the debate about the future direction of economic policy," and that "we should challenge the domination of both research and teaching by one narrow and very historically specific branch of the discipline, that of neoclassical economics," (p.237). Seed's ideas are less concerned with growth. Cato says the challenge for capitalist economies "is to build a diversity of alternative, locally grounded, self-reliant and resilient economies that rely on balance rather than growth," (p.235). Green economists and other anti-capitalists may therefore welcome Seed's approach. Governments and powerful groups such as the fossil fuel industry, on the other hand, may be less supportive of sharing power and resources.

In conclusion, these three initiatives demonstrate various approaches to tackling decarbonisation in Australia. A rhetorical approach makes it clear that these projects are embedded in ongoing chains of communication and replies to economic arguments, and emerge from contemporary financialised economies. Consequently, the challenge to decarbonise will, as Harvey points out, "require a massive effort by governments, businesses and individuals," (Harvey 2022).

References

Atkinson R.D and. Audretsch, D.B 2008, 'Economic Doctrines and Policy Differences: Has the Washington Policy Debate Been Asking the Wrong Questions?', *The Information Technology and Innovation Foundation:* September 2008.

Bryan, M and Rafferty, M 2018, 'Introduction', *Risking Together*: *how finance is dominating everyday life in Australia*, Sydney University Press.

Jobs, Precincts and Regions, Department of 2022, 'The CarbonNet Project', < https://earthresources.vic.gov.au/projects/carbonnet-project>, viewed May 12 2022.

Cato, Scott M 2011, 'Conclusion: Is it the economy? Are we stupid?' in *Environment and Economy*, Routledge, London.

Circular Economy Business Innovation Centre (CEBIC) 2022, 'Funded project – Building Australia's first zero waste hub for olive growers', *Circular Economy Business Innovation Centre,* viewed May 11 2022, <https://www.cebic.vic.gov.au/projects/zero-waste-olive-growers>

Climate Council 2021 'Call for the Australian government to cut emissions this decade', *Climate Council,* viewed May 14 2022*,* <https://www.climatecouncil.org.au/actions/petition-cut-emissions-75/.>

Creamer et al 2022, 'IPCC reports still exclude Indigenous voices. Come join us at our sacred fires to find answers to climate change', *The Conversation,* March 4, viewed May 12 2022, <https://theconversation.com/ipcc-reports-still-exclude-indigenous-voices-come-join-us-at-our-sacred-fires-to-find-answers-to-climate-change-178045.>

Ellen Macarthur Foundation n.d, 'What is a circular economy?', *Ellen Macarthur Foundation*, viewed May 14 2022, <https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>

Frankel, B 2018. 'Fictions of sustainability : the politics of growth and post-capitalist futures, Elsternwick, Melbourne: Greenmeadows, pp. 125-130; 137-48.

Garnaut, R 2019, *Superpower: Australia's low-carbon opportunity*, LaTrobe Uni Press, Carlton.

Harvey, F 2022, 'IPCC report: 'now or never' if world is to stave off climate disaster', *The Guardian*, April 5, viewed May 16, <https://www.theguardian.com/environment/2022/apr/04/ipcc-report-now-or-never-if-world-stave-off-climate-disaster>

Intergovernmental Panel on Climate Change 2022, IPCC Sixth Assessment Report: Mitigation of Climate Change, viewed May 14 2022, < https://www.ipcc.ch/report/ar6/wg3/>

Jobs, Precincts and Regions, Department of 2022, 'The CarbonNet Project', < https://earthresources.vic.gov.au/projects/carbonnet-project>, viewed May 12 2022.

Merzian, R 2022, 'IPCC Report Shows Road to Safety, Aust Govt stuck on Highway to Climate Disaster', *The Australia Institute*, April 5 2022, viewed May 12 2022 <https://australiainstitute.org.au/post/ipcc-report-shows-road-to-safety-aust-govt-stuck-on-highway-to-climate-disaster/>

Mazengarb, M 2022 https://reneweconomy.com.au/labor-and-coalition-enjoyed-more-than-1-15-million-of-fossil-fuel-donations-last-year/

Seed 2022, viewed May 15 2022 https://www.seedmob.org.au/

Zenghelis, D 201, 'Decarbonisation: Innovation and the Economics of Climate Change', *The Political Quarterly,* Vol 86, Issue 1: pp. 172-190.