

A MARSHALL PLAN FOR AUSTRALIAN COAL COUNTRY: AN INVESTMENT-LED STRATEGY TO ADDRESS RESOURCE DEPENDENCY AND FIGHT CLIMATE CHANGE

Robert MacNeil and Madeleine Beauman

Though Australia's abundant coal resources were widely considered a blessing for most of the country's modern history, their sizeable contribution to the escalating climate emergency has made their continued use increasingly dangerous. Indeed, as the world's largest exporter of coal, Australia stands as one of the worst contributors to the growing crisis, with the 'extracted/exported' emissions from its fossil fuel trade making it the fifth largest carbon polluter behind only China, the US, India, and Russia (Carbon Brief 2021). If further large-scale expansions of coal mines in Queensland were to proceed, a recent analysis finds that Australia could account for up to 17 percent of global emissions by the mid-2030s, easily making it one of the world's preeminent climate villains, and placing Canberra in flagrant violation of the Paris climate treaty which it signed in 2015 (Parra *et al.* 2019).¹

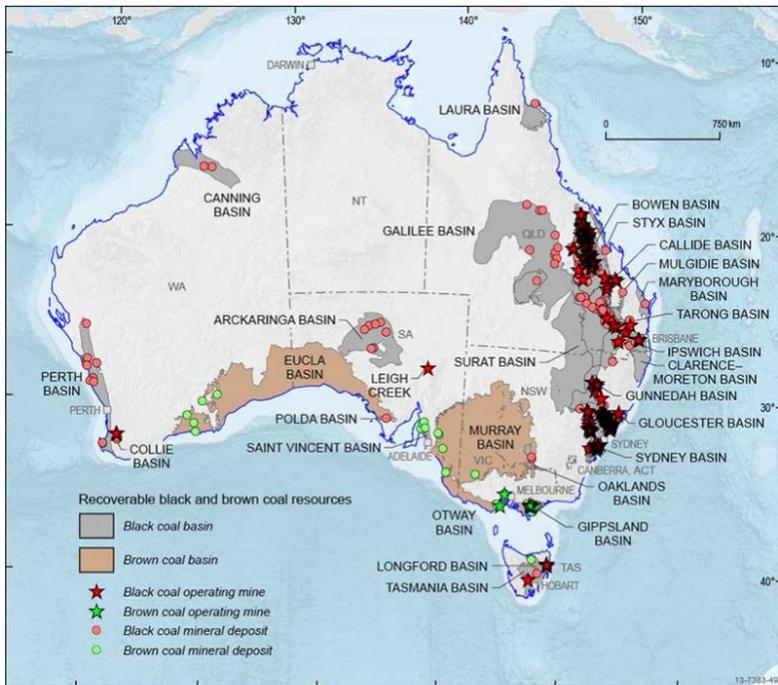
Breaking Australia's reliance on coal exports will undoubtedly constitute one of the greatest political and economic challenges the country has ever faced. But the challenge is made even greater by the complex ways that

¹ This scenario assumes that, over the coming decade, other countries would make significant strides towards achieving their Paris Accord pledges, while Australian coal exports would continue to grow.

MacNeil, R. and M. Beauman (2022)
**'A Marshall Plan for Australian coal country: An investment-led strategy to
address resource dependency and fight climate change'**
Journal of Australian Political Economy
No. 89, pp. 51-66.

the country's coal regions have become bound up in this debate. While Australia has a broad distribution of coal resources across its landmass (including locally important mining operations in the Collie Basin in Western Australia, Leigh Creek in South Australia, Fingal in Tasmania, and lignite mines in Victoria), the lion's share of the industry is clustered along a 2000 km corridor that stretches from Northern Queensland to Central New South Wales (see Figure 1).

Figure 1: Australian Coal Regions



Source: Geoscience Australia 2020.

Throughout these regions, hundreds of individual towns and communities have lived in relative prosperity over the past century thanks to the economic stimulus provided by the coal industry. In its sudden and unplanned absence, these communities can anticipate a domino effect of

lost jobs, declining tax bases, shrinking service provision, and diminishing populations. In this context, they have understandably emerged as a powerful reactionary force in resisting climate policies over the past generation and have leveraged their considerable political influence in that effort. This influence finds expression within both major parties, with powerful corporate interests from the coal industry influencing Liberal-National climate policy preferences, and powerful mining unions likewise casting a long shadow over Labor's positions (MacNeil 2021). This has been compounded by the increasing tendency of marginal electorates throughout coal country to prove decisive in national elections. The result has been an extreme reticence on the part of either major party to seriously address this problem, with the Liberal-National coalition content to approve new mines and propagate the falsehood that coal jobs will remain plentiful indefinitely, and Labor staking out weak middle-ground positions that generally convince neither mining communities nor environmentalists.

Given this complexity, how might this problem plausibly be addressed? In this brief article, we argue for a novel strategy for tackling the dual challenges of climate change and looming economic stagnation in Australia's coal regions. The proposal focuses, in particular, on massive state-led investments in the very communities and regions that will be most impacted by the country's transition to a low-carbon future, made expressly on the condition of a phased draw-down of coal extraction.² Indeed, rather than exacerbating the country's unhealthy reliance on coal by approving and promoting new mines, Canberra could fundamentally reshape the Australian economy by betting hard on a low-carbon future, and building political support for it by investing heavily in regions whose economies have long relied on fossil fuel extraction. This type of strategy – explicitly designed to bring good paying green jobs to these regions – could resituate coal country as the cornerstone of a low-carbon national economy, and provide an economic buttress for communities being asked to forego development of a resource that has sustained them for over a hundred years. Federal governments led by both major parties have already shown a keen willingness to make massive, concentrated investments in these regions by underwriting billions of dollars' worth of infrastructure for coal extraction and export over the years, and thus there

² We draw much of our inspiration for this type of strategy from Katz-Rosene's (2020) work on the Canadian context.

does not appear to be any first principle objection to a major government investment strategy of this scale in these communities.

While the notion of low-carbon investments in fossil fuel regions has been discussed by members of the Australian labour and climate movements for a while now, this contribution aims to further develop these ideas by focusing explicitly on the sorts of new industries that could be developed and expanded immediately, piggybacking off the numerous existing skills, capacities, and infrastructures already on offer in these regions. Such speed and overwhelming capital injection will be crucial to developing and maintaining the political support required to integrate Australia's coal regions into a new low-carbon economy. While several key opportunities exist, we focus on three specific ones: renewable energy, regenerative agriculture, and mine reclamation.

Climate politics in Coal Country

Despite the promises of conservative politicians, the future of Australian coal is not particularly promising. At the time of writing, half of the country's remaining domestic coal-fired power plants are scheduled to close within the next 15 years (with several others bringing forward their scheduled closure dates), while many of Australia's key export destinations are projecting major coal phase-outs as they strive for net-zero in the coming decades (Ritchie 2020; O'Malley and Wade 2021). Globally, the International Energy Agency projects a 90% decline in demand for coal by mid-century, with the fossil fuel sector likely to shed more than 5 million jobs worldwide (IEA 2021: 47). To make matters worse, as of 2020, each of Australia's major banks had announced they would no longer finance thermal coal projects in light of fears of stranded assets (Visontay 2020). Even metallurgical coal, long thought to be less vulnerable than thermal coal, has come under increased pressure as excitement builds around cleaner steelmaking alternatives, causing markets to increasingly make less of a distinction between the two types (Cunningham *et al.* 2019).

While coal's looming decline will have significant impacts for the broader Australian economy, its effects will be most acutely felt in Eastern Australia's coal regions, where the industry employs more than 40,000 people and supports many local economies through a combination of wages, royalties, taxes, fees, business purchases, and community

contributions (Woods 2020). Given Australia's neoliberal approach to industrial transitions over the past generation, these regions are likely to face a difficult future as the industry enters into decline. As major industries have closed over the past 40 years in Australia, entire regions have often been left for dead by governments, forced to endure painful processes of structural adjustment on their own as jobs vanished, tax bases dried up, housing prices collapsed, and large segments of the population moved away in search of new jobs (Beer 2018; MacNeil 2019). In many cases, these economic shocks ushered in a range of social problems associated with long-term economic decline, including rising rates of intergenerational poverty, suicide, and substance abuse.

In the United States (Australia's closest neoliberal cousin), the process of coal mine closures throughout Appalachia provides an unnerving preview of a potential future for Australia's coal regions. Following a series of technological changes and regulatory shifts that moved US coal production towards the country's mid-west, Appalachia entered into a brutal economic decline from which it has still yet to recover. Today, communities throughout the coal regions of West Virginia, Eastern Kentucky, and Tennessee are among the most impoverished in the nation, with median household incomes of just AUD \$16,000 per year (Sheldon *et al.* 2018). The region's poverty rate currently sits at 44 percent above the national average, with half of families living below the official poverty line – including three-quarters of those living with children. As suggested above, this economic stress has ushered in an epidemic of social problems, including some of the lowest life expectancies in the country, and highest rates of suicide, alcoholism, addiction, and domestic abuse (Ibid). While Appalachia represents an extreme scenario, it is nevertheless indicative of the style of industrial transition common to neoliberal societies over the past generation, where governments have refused to provide adequate transitional safety nets, and remained content to watch as once-vibrant communities enter into decline and decay (Harrison and Mikler 2014).

In their efforts to defend their local economies and avoid a similar fate, Australia's coal regions have exercised considerable influence over national debates around climate and energy policy. Nowhere has this influence proved stronger than in central-north Queensland, where a chain of marginal electorates has demonstrated an impressive capacity to swing entire national elections. This power was on full display in the 2019 federal election, as the issue of the proposed Adani Carmichael coalmine loomed large over the climate positions of the major parties, and, according to

some commentators, proved decisive in the election's outcome (Paul 2019; Mathiesen 2019; Ludlow 2019). While the Coalition bet hard on the mine's local popularity and greenlit its approvals prior to the campaign, Labor struggled to carve out a message capable of balancing the party's climate goals with the region's economic anxieties. In an effort to appease environmentalists, Labor left open the prospect of stripping the mine's approvals, while offering the creation of an ambiguously defined and unfunded 'just transition authority' as some compensation to communities in the region. However, Labor's efforts fell flat in coal country, resulting in major swings in the region of up to 15 percent after preferences, as voters sought the job security apparently on offer from the Coalition.

Yet, while the Coalition may have made a savvy calculation in 2019, an electoral strategy based around betting hard on coal appears unlikely to succeed over the longer term. Indeed, while its strong support for coal may be popular in parts of central Queensland, it has simultaneously winnowed away the party's support in moderate suburban electorates across the country, with a raft of so-called 'teal' independent candidates winning key seats throughout the party's urban heartlands in the 2022 federal election, including that of Treasurer Josh Frydenberg. In this context, both major parties appear to be in dire need of a more politically sustainable climate policy, one that can balance the need for jobs and economic vitality in the nation's coal regions, while still appealing to climate-conscious urban and suburban voters across the country. Whichever party can pull off this feat could indeed create a lethal and durable electoral coalition, potentially setting itself up for a long tenure in government.

But convincing coal communities to buy-in to progressive climate policies will not be easy. While residents of these regions generally accept that coal mining will not continue indefinitely, most are understandably hesitant to ditch an existing industry with good paying jobs available right now for some ambiguous, hypothetical alternative (MacNeil and Beauman 2022). Indeed, to date, neither major party at any level of government has proposed a transition plan equal to the challenge of guiding these communities through the looming shift, and as a result, residents have grown deeply sceptical that a just and orderly transition will ever materialise. This defensive posture is further compounded by a failure on the part of environmentalists and progressives across Australia to recognise and appreciate the contributions these communities have made to the country's development over the past century, leaving workers in these regions feeling like villains. In this context, feeling abandoned by

governments and alienated from much of the Australian community, many in these regions have simply made a calculated decision to cling ever tighter to the coal industry, despite its impending decline. How, then, might they be convinced to change their view?

A Marshall Plan for Coal Country

In the remaining sections of this article, we argue for a novel climate strategy that explicitly focuses on securing buy-in from Australia's coal regions, aiming to resituate them as cheerleaders for accelerated national decarbonisation. To do this, we propose a package of massive state-led investments that amount to something of a 'Marshall Plan'³ for these regions, made on the condition of a negotiated and phased draw-down of coal extraction. If executed properly, such an economic campaign – explicitly designed to bring tens of thousands of good paying jobs to these communities – could simultaneously break the back of their coal dependency and deprive the coal industry of a regional base of popular support to enhance its national political power. While this sort of public investment may seem like a lofty ambition given the reigning neoliberal culture of Australian governance, funding this sort of initiative could be as straightforward as redirecting government subsidies for fossil fuels in Australia, which in 2019 added up to over \$12 billion (Market Forces 2019). Over the course of a decade, this approximate sum of \$120 billion could fundamentally reshape these regional economies, setting them up to become the anchors of Australian economic prosperity in a decarbonised world.⁴

³ The Marshall Plan (officially titled the European Recovery Program) was an American initiative established in 1948 to provide significant levels of foreign aid to European countries struggling to recover following the war. The program provided the equivalent of AUD\$170 billion (in 2020 dollars) over four years to several recipient countries. While its primary political aim was to prevent the spread of communism throughout Europe, its economic impact is generally considered to have been enormous, helping to rapidly rebuild war-torn regions, modernise industry and improve overall growth and prosperity.

⁴ This general approach would mimic the sorts of coal transitions rolling out in countries like Germany, where the Structural Strengthening Act for Coal Regions (*Strukturstärkungsgesetz Kohleregionen*) provides approximately €40 billion over 20 years to restructure the impacted regions of North Rhine-Westphalia, Saxony-Anhalt, Saxony, and Brandenburg. These funds are aimed at promoting infrastructure capable of facilitating new economic development;

While there are numerous opportunities waiting to be explored and developed, we limit our focus here to just three: renewable energy, regenerative agriculture, and mine reclamation. We see these as particularly strong candidates for federal investment in these regions given that they are all effectively ‘shovel ready’, and could, with minimal worker retraining, be rapidly developed off the back of the region’s existing skills, capacities, and infrastructures to provide thousands of jobs and billions of dollars’ worth of new economic stimulus.

Renewable Energy

The first sector Canberra could promote in coal regions is clean energy. Opportunities for developing clean energy infrastructure are immense throughout these regions, with the need and potential for wind and solar technologies being much greater than their current installed capacity. As of 2021, only 18 percent of Queensland’s electricity was generated by renewables, meaning that roughly 45 terawatt hours of electricity must be converted away from fossil fuels to decarbonize the state’s grid (Government of Queensland 2022). Likewise in New South Wales, a mere 19 percent of electricity came from renewables in 2021, meaning that an additional 65-terawatt hours will have to be switched over to clean sources in the coming years (Government of NSW 2022). In reality, however, both states will require considerably more capacity than this as they begin to electrify their transportation and home heating/cooking infrastructures in their efforts to decarbonise. It will also entail massive expansions and retrofits of existing grid infrastructure to accommodate these renewables, requiring investments of up to \$33.6 billion and creating around 10,000 jobs in NSW alone (Government of NSW 2022a). All of this production, storage, and transmission infrastructure could be built and deployed in Australia’s coal regions starting right now with the aim of creating thousands of new construction and manufacturing jobs and billions of dollars in new economic activity over the coming years.

Why is coal country an ideal place to do this? As it happens, former mine sites are ideal places to situate large scale solar, wind and storage farms. Given that coal mining is extremely land-intensive in terms of its ecological strain, former mine sites cannot easily be rehabilitated for

skills development for retrenched coal workers; scientific research facilities; and public service expansions to help these regions build alternative local economies.

agriculture. They can, however, be converted for wind and solar projects, which would otherwise require the large-scale clearing of new land, with all the attendant social and ecological harms this entails. This has become standard practice in places like Germany, for example, where renewables developers have capitalised on the available former mine sites in its coal regions, along with the industrial capacity and technical skills that workers in these regions tend to have in spades. Across the country's mining belt, states like Brandenburg, Saxony and North Rhine-Westphalia have created tens of thousands of jobs at all stages of the projects (from planning, to manufacturing and installation), greatly outpacing the number of jobs previously provided by the region's coal mines and creating new tax bases for local governments (Gunduzyeli 2020).

If Australia's coal regions are enabled to become renewable energy powerhouses, they can also develop thriving secondary industrial sectors as manufacturing and minerals processing increasingly move to parts of the globe with abundant sources of cheap, clean energy. As Garnaut (2020) suggests, energy intensive industries like steel and aluminium production could find a natural home on Australia's sun-soaked lands and windy shores as the world increasingly comes to place a high premium on low-carbon production in the coming years. If managed and nurtured properly, these sorts of opportunities could lay the foundation for decades of regional and national economic prosperity.

Finally, to avoid purchasing these technologies from foreign firms and countries (and thereby sending billions of dollars' worth of Australian wealth offshore) the federal government could support the creation of domestic wind and solar manufacturing operations in these regions through, for example, the establishment of government-owned corporations designed to produce renewable technologies for the benefit of the Australian people. Indeed, as the outdated canards of market fundamentalism fall away, forward-thinking governments ought to be bold and courageous about the sorts of creative roles they can play in this process.

Mine rehabilitation and reclamation

A second major opportunity for state-led investment lies in mine site reclamation. Unbeknownst to most Australians, after two centuries of intensive mining activities, Australia is home to an astonishing 60,000+

abandoned mines that require urgent clean-up. Data on the disturbance footprint of these mines is spotty and incomplete, but the best estimates suggest that, nation-wide, it is well into the millions of acres, with much of this concentrated throughout Eastern Australia's coal mining regions (Callari 2020). Some of these mines pose significant ecological threats to their surrounding ecosystems from contamination, others pose major safety risks to humans and other animals, while others are simply a blight on public and Indigenous lands that significantly degrade the surrounding landscapes. Around the Hunter region, for example, coal mining operations over the past century have cleared critically endangered woodlands, altered the natural hydrology of the Hunter River and its tributaries, and dug up the cultural heritage of the Wonnarua, Gomeroi and Wiradjuri people. Both the New South Wales and Queensland governments have acknowledged that these derelict mines stand as the largest category of contamination liability for their states and will cost tens of billions of dollars to repair (Unger 2014).

Yet while governments have been content to kick this problem down the road in light of its enormous price tag, this could be reinterpreted by Canberra as an opportunity to provide decades of employment and economic stimulus to the nation's coal regions as they wean themselves off of fossil fuel extraction. Past reports from the federal Department of Industry have pointed in this direction, noting that there are substantial economic opportunities in rehabilitating abandoned mines, including through the development of conservation and tourism sites, and developing unique habitats for biodiversity enhancement (Australian Department of Industry 2016). Of course, many mining sites were imposed without permission on Aboriginal land over the years, and these communities may simply prefer that the sites be returned to their original condition to the greatest extent possible – a request which any decent and ethical government ought to grant.

Germany again provides an instructive example of how this sort of opportunity can play out if done properly. There, the federal government designed an AUD \$20 billion program to clean up several abandoned coal mine sites with the aim of providing tens of thousands of jobs for former miners. In instances like the IBA-SEE project, government funding helped transform old mine sites into specialised landscapes focused on creating new industries for the local economy (IBA-SEE 2021). In so doing, many of the same jobs and businesses created by the mining industry could be sustained by the new reclamation industry, with minimal skills retraining.

Regenerative agriculture

A third critical opportunity lies in the agricultural sector. Away from the mining sites, these areas are some of the country's most important agricultural regions, responsible for providing a large percentage of Australia's domestic food supply. At present, however, this sector is both a significant contributor to Australia's greenhouse gas pollution (accounting for approximately 15 percent of the country's emissions) and is highly vulnerable to the effects of a changing climate (Miller and MacNeil 2022). In this context, with a major federal investment program aimed at supporting a range of on-farm sustainability initiatives throughout these regions, Australia could simultaneously make dramatic reductions to the country's emissions profile, while also making farmers in these regions key partners in Australia's shift to a low-carbon economy.

Among the most discussed methods for achieving these goals is regenerative agriculture. Regenerative agriculture is a method of farming that mimics nature by encouraging polycultures of different plants, grazing animals in more natural ways, and removing the use of chemical pesticides and fertilisers in order to improve agricultural ecosystems and enhance their sustainability. This is needed because after two centuries of industrial agriculture, Australia's arable land has been significantly degraded, rendering it increasingly vulnerable to collapse in the face of a changing climate. In response, regenerative agriculture focuses on practices such as agroforestry, silvopasture, intercropping, no-till farming, and pasture-cropping in an effort to remake food production in nature's image and root out the worst excesses of industrial agriculture. In so doing, these practices can help farmers build resilience to climate change by enhancing soil quality, increasing crop yields, and boosting biodiversity, all while creating high-value food commodities.

While these sorts of practices are not particularly expensive, the cost of switching a conventional farming operation to a sustainable one can be quite costly and time consuming. This is where Canberra could play a productive role in financing this transition. In addition to providing federal funds for the service of shoring up the nation's food supply and reducing their emissions, the federal government could also, for example, fund agroforestry management planning and mass tree planting, exchange conventional machinery for new no-till equipment, and provide funding for soil carbon testing, expert consultation, and farm labourers (Katz-Rosene 2020). All of this would both give the region further buy-in to a

low-carbon economy and introduce new sources of wealth to stimulate the local economy as these regions transition away from coal dependency.

Conclusions and Caveats

The three cases on which this article has focused represent just a small sample of the opportunities available in this effort to transform coal regions. Indeed, to a limited extent, many of the opportunities outlined above are already being pursued in different parts of the country. Projects like the Hunter Renewal have, since 2018, been bringing together activists and community members throughout the region to develop plans for a transition beyond coal, and have explored ideas like those discussed above (Hunter Renewal 2021). Likewise, major unions like the Australian Manufacturers Workers Union (AMWU), Electrical Trades Union (ETU), and the Australian Council of Trade Unions (ACTU) have begun to develop detailed blueprints for potential industries to employ displaced coal workers, along with ideas around retraining programs for younger workers, early retirement packages for older workers, financial support mechanisms for those experiencing periods of prolonged unemployment as mines shut down, and locally governed ‘transition authorities’ to give communities political autonomy over the transition process (see *e.g.*, ACTU 2020). Several of these ideas have also been increasingly discussed by state governments in Queensland and New South Wales, both of which have increasingly acknowledged the precarity of coal in their economies and begun discussing the need for a broader economic plan for the future (Government of NSW 2021; Government of Queensland 2022).

Despite their efforts, the limited array of local and state initiatives currently on offer simply lack the resource capacity required for this effort. Only Canberra can provide the requisite financial investment, facilitative regulation, R&D support, and coordination between states, unions, communities, and the private sector that will be required to successfully execute this type of large-scale transition. In so doing, the federal government could finally realign conservative working-class communities in these regions with action on climate change and create the conditions for a renewed period of regional and national economic prosperity. And there is indeed plenty of reason to be optimistic that these communities would thrive under such conditions. These regions are home to fertile soils, extensive railway systems, diverse port infrastructures, broad expertise in

engineering, construction, and energy, and most importantly, hardworking communities of people who urgently want to ensure a viable future for themselves and their children in the region (Woods 2020).

To be sure, this strategy has some obvious pitfalls that need to be minded. In particular, despite the preferability of renewables over fossil fuels, they are not without their ecological drawbacks, and given their intensive land-use and disruption, they have considerable potential to impose on Indigenous lands (see *e.g.*, National Academy of Engineering 2010). In this context, this type of strategy would need to be informed by ongoing periodic reviews designed to ensure that investments are continually revised to reflect both the democratic will of these communities and the sovereignty of Australia's first peoples (Katz-Rosene 2020).⁵

Implementing any sort of plan along these lines will clearly not be easy. To the extent that such a strategy aims to phase out fossil fuel production in Australia, it poses an existential threat to an industry that is deeply embedded within Australia's economic and political system, and exercises considerable influence within both Coalition and Labor governments. In this context, implementing a plan of this scale and consequence would require a level of political boldness not currently on offer from either of the two major parties, and thus it is not realistic to expect governments to willingly endorse or lead on it.⁶ What this type of plan ultimately requires, therefore, is a renewed climate movement that brings together disaffected Liberals, Laborites, and Greens with unions and grassroots groups in these regions, explicitly aimed at reframing climate action in terms of working-

⁵ This is clearly no small task, and we do not mean to minimize it. Ensuring that a clean energy economy does not simply reproduce the same sorts of social and environmental exploitation as a carbon based one will be one of the biggest political and ethical challenges for the climate movement in the twenty-first century. For eco-socialists, this is a challenge which presupposes moving beyond capitalist modes of production and consumption. Indeed, given its underlying incentive structures, capitalism is seen as being unable to fundamentally solve the environmental crisis, but rather creatively reshuffles it, solving individual crises in service of continued growth and accumulation, while pushing the biosphere towards collapse (see *e.g.*, Magdoff and Foster 2010).

⁶ To date, the only political party that has proposed policies approximating the ambition of this type of strategy is the Greens. In the 2022 campaign, the party proposed a \$19 billion plan to diversify fossil fuel reliant communities and provide subsidies for coal workers transitioning into new jobs. As part of the strategy, the Greens proposed a 'job-for-job' guarantee for all displaced coal workers, and a \$2.8 billion fund to seed new industries in former coal towns.

class politics and security for blue-collar workers. Failing this, the industry's capture of the state and its policies will likely see Australian climate action continue to idle along, and these vulnerable communities go down with the ship of the coal economy.

Robert MacNeil is a Senior Lecturer in the Department of Government and International Relations at the University of Sydney.

robert.macneil@sydney.edu.au

Madeleine Beauman is a researcher in the Department of Geography at the University of Melbourne.

madeleine.beauman@gmail.com

References

ACTU (2020) 'Sharing the challenges and opportunities of a clean energy economy: A Just Transition for coal-fired electricity sector workers and communities', <https://www.actu.org.au/media/1032953/actu-policy-discussion-paper-a-just-transition-for-coal-fired-electricity-sector-workers-and-communities.pdf>.

Australian Department of Industry (2016) 'Mine Rehabilitation: Leading Practice Sustainable Development Program for the Mining Industry', Available at: <https://www.industry.gov.au/sites/default/files/2019-04/lpsdp-mine-rehabilitation-handbook-english.pdf>.

Beer, A. (2018) 'The closure of the Australian car manufacturing industry: redundancy, policy, and community impacts', *Australian Geographer*. 49 (3), 419-38.

Callari, M. (2020) 'With its mining boom past, Australia deals with the job of cleaning up', *Mongabay News*, Available at: <https://news.mongabay.com/series/land-rights-and-extractives/>.

Carbon Brief (2021) 'Australia', <https://www.carbonbrief.org/the-carbon-brief-profile-australia>.

Cunningham, M., Van Uffelen, L., and Chambers, M. (2019) 'The Changing Global Market for Australian Coal', *Reserve Bank of Australia*, Available at: <https://www.rba.gov.au/publications/bulletin/2019/sep/the-changing-global-market-for-australian-coal.html>

Garnaut, R. (2020) *Superpower: Australia's low carbon opportunity*, Melbourne: Latrobe University Press.

Geoscience Australia (2020) 'Applying Geoscience to Australia's Most Important Challenges. Australian Government', Available at: <https://www.ga.gov.au/data-pubs/data-and-publications-search/publications/australian-minerals-resource-assessment/coal>.

Government of NSW (2021) 'The sensitivity of the NSW economic and fiscal outlook to global coal demand and the broader energy transition for the 2021 NSW Intergenerational Report' Treasury Technical Research Paper Series.

Government of NSW (2022) 'State of the Environment: NSW Energy Consumption', Available at: <https://www.soe.epa.nsw.gov.au/all-themes/human-settlement/energy-consumption>.

Government of NSW (2022a) 'The Electricity Infrastructure Roadmap', Available at: <https://www.energyco.nsw.gov.au/index.php/about-energyco/the-electricity-infrastructure-roadmap>.

Government of Queensland (2022) 'Managing Queensland's Transition to Renewable Energy', Available at: <https://www.qao.qld.gov.au/reports-resources/reports-parliament/managing-queenslands-transition-renewable-energy>.

Gunduziyeli, E. and Muhlenhoff, J. (2020) 'Coal regions to become renewables hubs through just transition', *Climate Action Network Europe*, Available at: <https://caneurope.org/coal-regions-to-become-renewables-hubs-through-just-transition/>.

Hunter Renewal (2021) 'About the Hunter Renewal Project', Available at: <https://www.hunterrenewal.org.au/about>.

IBA-SEE (2021) 'Overview', Available at: <http://www.iba-see2010.de/en/verstehen/projekte.html>.

IEA. (2021) 'Net Zero by 2050: a roadmap for the global energy sector', https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf.

Harrison, N., and Mikler, J. (2014) *Climate Innovation: Liberal Capitalism and Climate Change*. Springer.

Katz-Rosene, R. (2020) 'Transforming Alberta: an investment-based strategy for combatting Western alienation and climate in Canada', *Studies in Political Economy*, 101 (1): 77-91.

Lachapelle, E., MacNeil, R., and Paterson, M. (2017) 'The political economy of decarbonisation: from green energy "race" to green "division of labour"', *New Political Economy* 22 (3), 311-27.

Ludlow, M. (2019) 'Adani blamed for Labor's wipe-out in Queensland', *Financial Review*, Available at: <https://www.afr.com/politics/federal/adani-blamed-for-labor-s-wipe-out-in-queensland-20190519-p510wn>.

MacNeil, R., Beauman, M. (2022) 'Understanding resistance to just transition ideas in Australian coal communities', *Environmental Innovation and Societal Transitions* 43, 118-26.

MacNeil, R. (2021) 'Swimming against the current: Australian climate institutions and the politics of polarisation', *Environmental Politics* 30 (sup1), 162-83.

MacNeil, R. (2019) *Thirty years of failure: Understanding Canadian climate policy*, Halifax: Fernwood.

Magdoff, F., Foster, J.B. (2010) 'What every environmentalist needs to know about capitalism', *Monthly Review*, <https://monthlyreview.org/2010/03/01/what-every-environmentalist-needs-to-know-about-capitalism/>.

Market Forces (2019) 'How your tax dollars subsidise fossil fuels', Available at: <https://www.marketforces.org.au/campaigns/ffs/tax-based-subsidies/>.

Mathiesen, K. (2019) 'Australia's coal communities, ignored by Labor, deliver brutal election defeat', *Climate Home News*, Available at: <https://www.climatechangenews.com/2019/05/20/australias-coal-communities-ignored-labor-deliver-brutal-election-defeat/>.

Miller, G., MacNeil, R. (2022) 'Farmer perceptions of climate change and adaptation during the 2017–2020 Australian drought', *Australian Journal of Political Science*, 1-18.

National Academy of Engineering (2010) *The Power of Renewables: Opportunities and Challenges for the United States*, Washington: National Academies Press.

O'Malley, N., Wade, M. (2021) 'NSW coal industry would die in 20 years, worst case scenario predicts', *Sydney Morning Herald*, Available at: <https://www.smh.com.au/national/nsw-coal-industry-would-die-in-20-years-worst-case-scenario-predicts-20210607-p57yvy.html>.

Parra, P., Yanguas, B., Fuentes Hutfilter, U., and Roming, N. (2019) 'Evaluating the significance of Australia's global fossil fuel carbon footprint', Report prepared by Climate Analytics for the Australian Conservation Foundation, Available at: https://climateanalytics.org/media/australia_carbon_footprint_report_july2019.pdf.

Paul, S. (2019) 'In coal we trust: Australian voters back PM Morrison's faith in fossil fuels', *Reuters*, Available at: <https://www.reuters.com/article/us-australia-election-energy-idUSKCN1SP06F>.

Ritchie, H., (2020) 'Electricity mix. Our world in data', Available at: <https://ourworldindata.org/electricity-mix>.

Sheldon, P., Junankar, R., and De Rosa Pontello, A. (2018) 'The Ruhr or Appalachia? Deciding the future of Australia's coal power workers and communities', IRRC Report for CFMMEU Mining and Energy. Industrial Relations Research Centre.

Tranter, B. and Foxwell-Norton, K. (2021) 'Only in Queensland? Coalmines and voting in the 2019 Australian federal election', *Environmental Sociology*, 7 (1): 90-101.

Unger, C. (2014) 'What should we do with Australia's 50,000 abandoned mines?', *The Conversation*, Available at: <https://theconversation.com/what-should-we-do-with-australias-50-000-abandoned-mines-18197>.

Visontay, E., (2020) 'Nationals call for ANZ boycott after bank's push for net zero emissions', *Guardian*, Available at: <https://www.theguardian.com/australia-news/2020/oct/29/nationals-call-for-anz-boycott-after-banks-push-for-net-zero-emissions>.

Woods, G. (2020) 'Transforming Australia's coal country', *Earth Island Journal*, Available at: <https://www.earthisland.org/journal/index.php/articles/entry/transforming-australia-coal-country/>.

Wordsworth, M. (2019) 'Vote Compass response shows most Australians want Adani mine stopped', *ABC News*, Available at: <https://www.abc.net.au/news/2019-05-16/federal-election-vote-compass-adani-mine-response/11110408>.

Yeates, C. (2017) 'Big four banks slash lending to coal miners', *Sydney Morning Herald*, Available at: <https://www.smh.com.au/business/banking-and-finance/big-four-banks-slash-lending-to-coal-miners-20170720-gxf9u8.html>.