2

Climate Governance and Federalism in Australia

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2.1 Introduction

Australia is one of the highest per capita producers of greenhouse gas (GHG) emissions and is regularly accused of dragging its heels on emissions reduction – as exemplified by the absence of a carbon pricing scheme (e.g., CAT 2020; CT 2020; Germanwatch 2020). What role has federalism played here?

As outlined in the Introduction (Chapter 1) to this book, federalism has a number of amphibolous qualities. On the one hand, it provides opportunities for locally tailored and experimental policymaking, a degree of 'fail safe' redundancy, and an opportunity for policy experimentation and inter-jurisdictional learning. On the other hand, it risks obstruction, patchy and counterproductive efforts, misalignment or discoordination; and collective action problems. Concern about coordination deficits has been particularly prominent in discussion of climate-change policy in federal systems such as Australia's.

> The politics of climate change mitigation are made even more difficult in Australia by a number of distinctive contingent factors. Firstly, Australia's federal system, and the difficulty of achieving national policy consensus, makes agreement challenging at the best of times; when the stakes are high and the issues complex and the consequences uncertain, it can be particularly difficult to achieve agreement, as the unresolved inter-state struggle over water allocation reminds us. (Beeson and McDonald 2013, 335)

The result is "fragmentation" (Jones 2009) – a problem, it is claimed, that can only be addressed by "vertical coordination" (Gordon 2015, 123; also D. M. Brown 2012, 331–2; Kallies 2021).

This chapter outlines a situation where a country with heavy reliance on carbon-intensive energy resources has faced substantial greenhouse gas dilemmas, where those dilemmas manifest themselves in strong ideological and partisan differences, and where both the central government (the Commonwealth) and the States have broad licence in climate change policymaking. It finds that the need for

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coordination can be exaggerated. Federalism has been a facilitating rather than a hindering factor in Australia, more consistent with Derthick's (2010) notion of *compensatory federalism* where 'governments at one level of the system are able to compensate for weaknesses or defects at another level', or Hollander's (2010) emphasis on the often-unrecognised benefits of 'overlap and duplication'.

2.2 The Australian Conundrum

High-emissions industries are one of the cornerstones of the Australian economy and this dependence explains the country's cautious approach to emissions reduction and ambivalence towards international commitments. At the same time, though, this historic dependence means there has been a good deal of low-hanging fruit to pick. Australia is also endowed with enormous potential for renewable energy development.

2.2.1 Contributions

Australia is one the highest high per capita emitters of $C0_2e$ in the world, and the highest per capita emitter among the industrialised democracies: 21 tonnes per person in the year to March 2020, down substantially from 36 tonnes per person in 1990 (DISER 2020b).[1] With a negligible share of the world's population, though, Australia's aggregate output of 530Mt is comparatively small. Producing scarcely more than 1 per cent of the global total, Australia's emissions are insignificant compared with the United States at 15 per cent, or, at the extreme, China at almost 30 per cent.[2] This is important not only in itself, but also in understanding the climate change debate within Australia, since it means that no matter how strenuous Australia's emissions-reduction efforts, in themselves they can have only the most trivial material effect on climate change.

The leading source of Australian emissions is electricity generation, dominated by coal-fired power stations. In turn, this reflects the now-inconvenient reality that Australia has coal in abundance, which is also the country's second most valuable export after iron ore. Even worse as far as greenhouse gas emissions are concerned, Australia is particularly rich in the dirtier *brown* coal (lignite), holding one-quarter of the world's recoverable resources, suitable only for *in situ* usage. 'At 2018 rates of extraction, the accessible resource base … will support over 1000 years of production' (Geoscience Australia 2020, 29). These reserves are, for all intents and purposes, unlimited and have long been the main fuel for electricity generation in one of the two most populous and industrialised States, Victoria.

In turn, electricity generated by vast coal deposits has underwritten investment in energy-intensive resource processing such as the transformation of bauxite, of

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which Australia is the world's leading producer, into alumina, of which Australia is the world's leading exporter; and the transformation in turn of alumina into aluminium. The Tomago aluminium refinery, for instance, alone uses 10 per cent of the entire New South Wales electricity supply and the Portland aluminium refinery accounts for a similar share of electricity use in Victoria. The significance of this lies in the reality that minerals processing is a large part of what passes for manufacturing in Australia's resource-dominated export profile and thus plays an outsized economic role. For over a century, Australian public policy has sought to diversify the economy away from its comparative advantage in primary products, but with mixed results (Fenna 2016). Aluminium is Australia's leading 'manufactured' export, making up 8 per cent of the total, and ranks sixteenth in total exports. It is not hard to see why climate change policy in Australia is, if not all about, certainly very much about, electricity generation. 'The early and orderly movement to zero-emission electricity is the cornerstone of the decarbonisation of the Australian economy' (Garnaut 2019, 49).

At the same time, Australia is not short of the main climate-friendly alternatives: wind and solar. 'Australia's renewable energy resource endowment is both large and rare' (Wood, Dundas, and Ha 2020). With distinct advantages to exploit in converting to a low-carbon economy, 'Australia would prosper exceptionally from doing its fair share in a strong global effort to reduce the disruption from climate change' (Garnaut 2019, 15). Research suggests that '100% renewable electricity in Australia' is feasible (Blakers, Lu, and Stocks 2017; Lu et al. 2021) – though 'net-zero' emissions would be more practical (Wood and Ha 2021). It is also convenient that the country's fleet of large coal-fired power stations is an ageing one, 'and most are scheduled to be retired by 2040', particularly those in Victoria and New South Wales (Wood and Ha 2021, 6). There is thus not the problem of stranded assets there might be.

Obstacles to reaching majority reliance on renewables for electricity generation include challenges in balancing the grid to cope with their distributed and variable nature, and realigning the existing transmission systems to accommodate new sources of supply (AEMC 2019a). Battery storage has become increasingly important for the former, and 'renewable energy zones' for the latter. When a severe storm caused an alarming blackout across South Australia in 2016 – immediately following the closure of the State's last coal-fired baseload power station – energy security became a prominent concern and possible political obstacle to an enthusiastic embrace of renewables.

These obstacles have become an issue precisely because renewable generation has grown so rapidly – notwithstanding Australia's comparative advantage in fossil fuels. That expansion in turn means that other emissions sources will become more significant. The transport sector will soon replace electricity generation as the

country's leading source of emissions and thus transitioning away from combustion-engine vehicles will become the next frontier (Saddler 2021). Meanwhile, in 2020, Australia became the world's largest exporter of liquified natural gas (LNG), production of which generates significant emissions as well.

2.2.2 Consequences

At the same time as being a large per capita contributor to global warming, Australia is also particularly vulnerable to its consequences. The continent is in many ways a fraught ecosystem characterised by droughts, fires, floods, and cyclones. Australia is 'a country defined by extremes: erratic climate influences virtually every aspect of our lives' (Gergis 2018, 8). Extreme weather events are normal, but at risk of being accentuated by climate change, and Australia has been described as 'the most vulnerable nation in the developed world' (Gergis 2018, 264; also Christoff 2014).

There are regularly warnings that this is bringing with it more frequent and more severe bushfires (e.g., Abram et al. 2021; BOM and CSIRO 2020; ELCA 2019; Lukas et al. 2007) – particularly after the devastating ones of 2019–20 (Hughes et al. 2020; Steffen et al. 2019). This finds some support in the research (e.g., van Oldenborth et al. 2021). In addition, because Australia's population lives and plays disproportionally in the littoral zone, the threat of rising sea levels to coastal infrastructure and amenities has been recognised as a significant risk for over a decade now (e.g., DCC 2009; also Arbinolo and Gamper 2021). Governments mapping out comprehensive emissions-reduction programs in Australia typically link the importance of such action to the prediction of such risks (e.g., DELWP 2021, 9).

2.2.3 International Commitments

Australia's climate change commitments go back to 1990 when it signed up to the Toronto target of a 20 per cent reduction in emissions from 1988 levels by 2005. This was a soft or 'no regrets' commitment in that it was to be implemented only if it could be done without economic cost. Australia signed the Kyoto protocol in 1998, but only ratified it in 2007, after a change of government (see below). Policy inaction under the Kyoto protocol was legitimised by the provision in that treaty allowing Australia to use land clearing emissions to inflate the 1990 baseline measure (CAA 2019; Crowley 2010). Australia ratified the more pragmatic Paris Agreement of the UNFCCC in 2016, committing to 26–28 per cent reduction by 2030, a target the government described in self-congratulatory terms as 'ambitious' (DEE 2017; Kellow 2018; also see Hale 2016).

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The government's Climate Change Authority (2015) had, however, recommended a target twice as ambitious if meaningful reduction was to be made and the economic opportunities of new technologies seized. The existing targets would be insufficient to get Australia near the net-zero-by-2050 aim that was being widely adopted, and existing measures insufficient to ensure Australia meets even its modest 2030 Paris target without using so-called carryover credits (AATE 2020). By contrast, all but one of the States have adopted their own emissions-reduction targets without any obligation to do so, as discussed below.

2.3 Climate Governance and the Federal System

The nature of Australian federalism is such that, with some important exceptions, either or both orders of government can play a substantial role in emissions reduction. Responsibility for climate change adaptation, meanwhile, sits more naturally with State and local government – with the latter being 'on the frontline in dealing with the impacts of climate change' (SCCC 2012). Even there, though, the Commonwealth inevitably has a role to play.

2.3.1 The Division of Powers in Theory and Practice

The Commonwealth Constitution lays out a scheme for a classic 'coordinate' or 'dual' federal system where the States have full responsibility for the majority of domestic policy tasks. The Commonwealth was assigned a limiting list of powers, chiefly concerned with managing Australia's external relations and ensuring the national economy. Few of the Commonwealth's powers were made exclusive, but it enjoys primacy in all concurrent fields. Particularly since 1920, though, the Commonwealth has steadily expanded its remit, supported by expansive High Court interpretation of its assigned powers (Aroney 2017; Fenna 2019). With the States being denied access to sales taxes by the High Court, and the Commonwealth taking exclusive control of the personal and corporate income tax in 1942, Australian federalism has been characterised by a pronounced vertical fiscal imbalance (VFI). And with the States thus holding responsibilities far in excess of their tax revenues, and the Commonwealth enjoying tax revenues well in excess of its needs, there has been ample scope for exercise of the 'spending power' as sanctioned by section 96 of the Constitution (Fenna 2008). Through conditional, or 'tied', grants, the Commonwealth exercises policy influence virtually at will in areas of State jurisdiction.

In addition, broad interpretation of its enumerated powers has given the Commonwealth enormous clout via key clauses such 'trade and commerce with other countries, and among the States' (§ 51.i), 'corporations' (§ 51.xx), and

'external affairs' (§ 51.xxix). The latter makes it possible to over-ride the States in any respect of which Australia has signed an international treaty, and has provided the foundation since 1982 for the assumption by the Commonwealth of a substantial role in environmental policy (Fowler 2015; Saunders 1996; Twomey 2008).

The result of this expansion in Commonwealth power has been to create a great deal of overlapping and thus de facto concurrency. The States have generally maintained service delivery responsibility, but in various areas of their jurisdiction the Commonwealth exercises some degree of influence or control. At certain times it appears that the States are very much under the thumb of the Commonwealth, and there are periodically calls for them to be abolished. That traditionally came from the Labor side of politics, and now on the conservative side even the Liberal Party has largely abandoned its traditional defence of States' rights and shifted to a much more centralising view (Hollander 2008; Sharman 2001). The Covid-19 pandemic of 2020–2 showed, though, just how important the States remain, having assumed primary responsibility for protecting their citizens – even to the point of closing their respective borders – and on various fronts resisted Commonwealth pressure to be more relaxed in their approach (Fenna 2021).

Local government occupies a decidedly subordinate position in the Australian system (Grant and Drew 2017; Sansom 2009). In part, this is for straightforward constitutional reasons: local governments have no federal constitutional recognition and are entities of their respective State governments, exercising delegated powers with State government oversight.

2.3.2 Climate Change Governance and the Division of Powers

The States have primary jurisdiction over almost the full range of functions relevant to climate-change policymaking: criminal and civil law; land and resource management; transport and urban planning; infrastructure, including network utilities; public services; and the environment. Until privatisations in the 1990s, the States all owned and operated their respective electricity utilities – the chief emissions culprit. Some still do, and they all still regulate and control them.

At the same time, there is at least implicit recognition that the Commonwealth has a legitimate role in energy policy, in part because of the establishment of the national electricity market (NEM) linking the five eastern States (AEMC 2019b; COAG 2001). The NEM is a fairly recent phenomenon, and only connects the different systems rather than creating a single new one. It is managed by the Australian Energy Market Operator (AEMO), established in 2009.[3] The NEM's interconnexions become increasingly important as the reliance on variable renewable energy increases (Wood and Ha 2021, 45).

What the States no longer have is a broad power to tax. If we accept that a carbon tax of some form is the most economically efficient and administratively simple way of moderating emissions (Garnaut 2019, 117; OECD 2019; Rabe 2018), this represents a significant limitation on State action. Constitutionally, no Australian State is in the position to emulate British Columbia, 'a poster child of political courage and policy efficacy' (Rabe 2018, 204). Between its plenary power to tax, the external affairs power, the corporations power and the commerce and trade power, the Commonwealth has ample authority and resources to implement virtually any climate change mitigation policy it so chooses. The Commonwealth would have little difficulty imposing an aggressive emissions-reduction programme in Australia.

Local governments, meanwhile, have been taking steps to reduce emissions, not just in their own operations, but also more widely in their communities (Proudlove, Bravo, and Denis-Ryan 2020). A large part of their contribution can only be to the long-term, however, given the importance of the built environment, and hence urban planning and transport infrastructure, for sustainability (Lowe 2017). While climate change adaptation also involves all levels, local government is generally described as being 'at the forefront', particularly in respect to the coastal zone (Leitch 2017; Nalau, Preston, and Maloney 2015). After Labor won the 2007 federal election there was some expression of interest from Canberra in a greater Commonwealth role (e.g., HSCCCWEA 2009). However, subsequent intergovernmental consideration largely endorsed the status quo (SCCC 2012).

2.3.3 Cooperative Federalism in Australia

The large amount of de facto concurrency in the Australian system fuels a comprehensive network of intergovernmental relations – comprising numerous intergovernmental agreements, ministerial and specialist councils, and, at the apex, regular first ministers' meetings (Fenna and Phillimore 2015). From 1991 through until Covid-19 precipitated a change in 2020, the latter went by the name of COAG, the Council of Australian Governments (Fenna 2021).[4] Of particular relevance to climate change has been the COAG Energy Council.

Intergovernmental relations in Australia are overwhelmingly vertical rather than horizontal in nature, and top-down, given the Commonwealth's expanded constitutional authority and superior resources (Phillimore and Fenna 2017). A rare exception, noted below, was when Labor governments held office in all the States and Territories while the Liberal–National Party coalition ('the Coalition') held office at the Commonwealth level. This led to a flirtation with horizontal collaboration between the States. In general, collaboration has tended to occur when and insofar as it has been useful and attractive to the Commonwealth.

2.4 Climate Change Politics and Policy in Australian Federalism

A key factor in climate change policy in Australia has been the interaction between partisanship and federalism. In particular, the existence of two orders of government with relevant powers has allowed climate change action to be pursued through one channel when the other is blocked.

2.4.1 Ideology and Partisanship

Climate change has been a partisan issue in Australia, divided ideologically between Left and Right consistent with longstanding differences between the parties (Botterill and Fenna 2020). On the Left, the Australian Labor Party (ALP) and more so the Greens have favoured action. On the Right, the Liberal and (particularly) the National parties have resisted, sometimes staunchly so (Fielding et al. 2012; Tranter 2013). They regularly emphasise the 'immense' cost to Australia of turning its back on fossil fuels (e.g., Wild 2022). Underpinning this ideological and partisan divide has been the schism between the two-thirds of Australians who accept the notion of a scientific consensus on the proposition of anthropogenic climate change and the one-third who do not (Tranter 2017).

Epitomising the divide was the contrast between Labor prime minister Kevin Rudd's 2007 declaration that climate change is 'the great moral challenge of our generation', and then-Treasurer and subsequent Liberal prime minister Scott Morrison's appearance in parliament on 9 February 2017, prop in hand, announcing 'this is coal; don't be afraid, don't be scared; it won't hurt you'. Morrison went on to assert that coal has ensured Australia's prosperity for over a hundred years. There were calls from within the Coalition, not just for preservation of the coal-based status quo, but indeed for the government to subsidise construction of new coal-fired power stations (Coorey and McIlroy 2020).

The partisan divide was also evident in the contrast between Labor's commitment in the 2016 election to a 'net zero pollution' target for 2050 and the Liberal Party's absence of a long-term target altogether (Pearse 2018, 583). By 2020, the Liberal Party's position had shifted away from coal slightly but not away from hydrocarbons, with Australia's large reserves of natural gas being touted as the key transition fuel to sustain the country's processing and manufacturing industries for the foreseeable future (Fisher 2020; PM 2020). That position drew much criticism for being neither economically nor environmentally rational (e.g., Climate Council 2020; Ogge 2021; Stock et al. 2020; Wood and Dundas 2020). In general, the conservative side of politics has stuck to the 'no regrets' approach that had prevailed in 1990, rejecting measures that might impose costs on Australian industry and maintaining a commitment to the status quo through fossil fuel

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subsidies as well as funding for carbon capture and storage (Campbell, Littleton, and Armistead 2021). The suggestion after the 2019–20 bushfires that climate change is exacerbating Australia's natural disaster problems has led the conservative side of politics to emphasise 'preparation, resilience and adaptability' rather than change their stance on mitigation (Benson and Chambers 2020).

No party is ideologically monolithic, though, and there have been dissenting elements on both sides. The ALP is home to major unions representing workers in the extractive, minerals processing, and associated industries – unions that pressed the Party in late 2020 to take a more cautious approach to phasing out coal and gas (Brown 2020). The Liberal Party, meanwhile, has a progressive wing open to climate change action, and factional conflict around this issue has contributed to leadership turmoil and change. Their Coalition partner, the National Party, is more solidly attached to the status quo and often unabashedly pro-coal, arguing that 'Australia needs to build modern coal fired power stations to help manufacturing industries' (Nationals 2021, 18).

2.4.2 Regional Variation

While it important to note that 'carbon-intensive industries are often regionally concentrated, both in an international sense and in a subnational sense' (Brown 2012), this is less true of Australia than of some other federations such as Canada (Macdonald 2020). Hydrocarbons are widely distributed across the country, including in Victoria and New South Wales, the two metropolitan States. The three most populous States, those along the eastern seaboard, all rely on coal for electricity generation, and Queensland and NSW are the country's major coal exporters as well. There is one State with abundant hydroelectricity and all its electricity generated from renewables, but that is the minor – and offshore – State of Tasmania. Western Australia and South Australia have coal deposits, albeit of a smaller scale, and South Australia closed its coal mine and associated power stations in 2015–16. Meanwhile, Australia's abundant gas reserves, onshore and offshore, are also distributed around the country.

There is one jurisdiction – Western Australia – that is massively dependent on resource extraction, but unlike the Canadian province of Alberta, its dependence is first and foremost on iron ore and other minerals rather than hydrocarbons.[5] That said, it has a large and growing LNG industry, and indeed, produces over half of Australia's massive LNG exports. Queensland, the next most resource-based economy, is far more dependent on fossil fuel production, but is considerably more diversified than Western Australia. In its disproportionate contribution to emissions, Queensland is not entirely unlike Alberta. However, producing 32 per cent of Australia's emissions with 20 per cent of the country's population,

Queensland rather pales in comparison beside Alberta, which produces 38 per cent of Canada's total emissions with only 11.5 per cent of the country's population.[6] Moreover, while Queensland emissions came down somewhat from 1990, Alberta's increased 58 per cent over the same period (Macdonald 2020, 96).

2.4.3 Stasis: The Commonwealth

With the main parties being so strongly opposed on this issue, national policy directions have not just fluctuated wildly, but have been determined by the side of politics that has dominated over the past twenty-five years of climate change policymaking. At the national level, this has been the Coalition parties (1996–2007 and 2013–22). Thus, a combination of changes in government and Coalition dominance explains why 'Australia is the only country in the world to have adopted then abandoned carbon pricing', discussed below (Crowley 2017, 2).

A further factor has been Australia's strong bicameralism, most importantly in the federal parliament, but also in five of the six States. In the Senate, proportional representation ensures that the governing party at the national level only very rarely enjoys a majority and thus cannot be assured of getting its legislation passed. Enacting controversial new measures can thus be difficult, and, for Labor, support from the Greens has often been important. While working at times to hobble Labor's efforts to introduce emissions-reduction policies, the Senate has also worked to frustrate Coalition efforts at dismantling Labor policies.

The Coalition parties generally addressed emissions reduction through subsidy-based initiatives. However, there was one early programme that represented more of an imposition on industry: 'the first mandatory renewable energy target (MRET) in the world' (Kent and Mercer 2006, 1046). Introduced in 2001, its goals, though, were modest: requiring that 2 per cent of electricity (9,500 GWh) be generated from renewables by the end of the decade.

2.4.4 Enter the States

The partisan divide is equally evident at the State level, where the 'impact of parties' can be seen across a range of policy fields, not least of all climate change (Phillimore and Fenna 2020). While the Coalition parties were entrenched in Canberra from 1996 until 2007, the opposite was true at the State level. Those State and Territory Labor governments acted individually and collectively to fill the gap left by Commonwealth inaction. In general, the States picked up the baton when they were in Labor hands, and then dropped it when the other side of politics took over (Crowley 2013, 380). As in the United States (Berry, Laird, and Stefes 2015; Bromley-Trujillo and Holman 2020), partisanship has been an important

variable in Australian climate change policy at the State level. However, this has diminished recently, and some convergence has occurred, with non-Labor governments in South Australia and New South Wales reconciling themselves to climate change action – sometimes to the consternation of their federal colleagues.

2.4.4.1 Individual State Action

Individually, there was a range of steps the States could – and did – take. The signature initiative from this period was early experimentation with an emissions trading scheme (ETS). 'In 2003, the New South Wales Labor (NSW) government introduced one of the first mandatory greenhouse gas ETSs in the world, followed by the Australian Capital Territory Labor government, which introduced a complementary scheme in 2005' (Crowley 2013, 371). The NSW Greenhouse Gas Abatement Scheme operated for almost a decade before being terminated following Labor's election defeat in 2011. While NSW Labor seemed to have 'lost its way' in many policy areas, climate change was a rare exception (Sartor 2011, 288 and *passim*).

More common at the State level were actions to support the conversion from coal to renewable sources for electricity generation. Complementing the Commonwealth's MRET, for instance, was *Victoria's Renewable Energy Act 2006*, introduced by the Labor government that had come to office in 1999 with upper house support of the Greens. It set a target of 10 per cent renewables by 2016. The chief mechanism by which States energised the renewables market was feed-in tariffs providing what was effectively a cross-subsidy for the uptake of rooftop solar.

2.4.4.2 Collective State Action

From 2002 until 2008, Labor held office in every State and Territory, laying the basis for collective action. An unprecedented level of horizontal intergovernmentalism followed, including the formation of CAF, the Council for the Australian Federation.[7] The States and Territories developed plans for a National Emissions Trading Scheme beginning with 'the establishment of a 'National Emissions Trading Taskforce' in 2004' (Twomey 2012, 108). The notion had been mooted by a Commonwealth government agency but not pursued (AGO 1999) and was consistent with the compromise approach that became internationally fashionable in this period (Meckling 2011). At the February 2007 meeting of COAG, the States and Territories pledged to go it alone if the Commonwealth failed to come onside.[8]

2.4.5 Commonwealth Takes the Lead: The Carbon Tax

By the time the Emission Trading Taskforce's Report was released, Labor had come to power in Canberra and the Commonwealth assumed leadership on the

question after what 'has been described as the world's first climate change election' (Beeson and McDonald 2013, 331; Rootes 2008). Given the changed political landscape, the Taskforce Report emphasised that a 'collaborative arrangement through the Council of Australian Governments (COAG) is required. Such an example of cooperative federalism would build on more than three years of consistent work through the Taskforce' (NETF 2007, xiv). The States and Territories also commissioned the Climate Change Review (Garnaut 2008), which likewise only released its report once leadership had migrated to the Commonwealth.

'Australia's climate change policy changed dramatically in late 2007 with the ratification of Kyoto by the newly elected Labor government' led by Kevin Rudd (Crowley 2010). The centrepiece of the Rudd government's climate policy was the introduction of legislation for an emissions trading scheme as promoted by the Labor States. This was officially the Carbon Pollution Reduction Scheme, or CPRS (Macintosh, Wilkinson, and Deniss 2010). According to the Commonwealth government's key policy research body, the Productivity Commission, the CPRS would displace existing programmes, including the MRET. 'With an effective ETS, much of the current patchwork of climate change policies will become redundant and there will only be a residual role for state, territory and local government initiatives' (PC 2008). While there may well be State-based programmes that become redundant in such circumstances, this fails to acknowledge the many ways in which other policy instruments can reinforce, support, augment, or be otherwise complementary to an overarching national programme (Buzbee 2015).

To placate industry, the CPRS was substantially watered down – to the point where the Greens withdrew their support and the bill was defeated in the Senate in 2010. The Labor government did succeed, though, in renewing and substantially lifting the renewable energy target (RET) from the old MRET's 2 per cent to 20 per cent, or 45,000 GWh, by 2020 (St John 2014). Consistent with the highly collaborative approach the Commonwealth was taking with the States in the first two years after Labor had come to power (Fenna and Anderson 2012), this was developed through COAG. However, like intergovernmental relations in Australia more generally, it was a top-down process where the Commonwealth tended to dominate (Jones 2010).

Labor formed a minority government under new leader Julia Gillard in 2010 with the support of the Greens and other independents. Having made a formal agreement with the Greens, who held the balance of power in the Senate, Labor introduced a bill for a new carbon-pricing scheme, the *Clean Energy Future* plan in 2012 (Crowley 2013). The scheme came into effect on 1 July that year, imposing a carbon price and establishing the framework for an emissions-trading scheme.

2.4.6 Axing the Tax

Labor was defeated in elections the following year, and the adoption of a carbon tax despite promises in 2010 to the contrary contributed to that loss (Economou 2015, 348). 'Axe the tax' had been the Coalition's war cry (Talberg 2016, 145), and the new government promptly did just that (Crowley 2017). Indications are that over its two-year life, the carbon price mechanism did make a dent in emissions (Diesendorf 2019, 42; Grudnoff 2020; also Best, Burke, and Jotzo 2020). In its stead, the Coalition implemented their 'Direct Action Plan' which focused on voluntary measures and subsidies such as the Emissions Reduction Fund (DEE 2017). Thanks to the Senate, the renewable energy target survived, although it was scaled back to 33,000 GWh. For the entire duration of the Coalition's most recent nine years in office federally, from 2013 to 2022, it maintained this line. For a brief period, the faction within the Liberal Party favouring action held sway, and in conjunction with the States developed a compromise called the National Energy Guarantee (ESB 2018); however, a leadership change ended that foray. When, eventually, at the United Nations Climate Change Conference in late 2021, the prime minister announced that Australia would commit to net zero emissions by 2050, it was made clear that this would be achieved in what they called 'the Australian way' – meaning without jeopardising existing industries and comparative advantage (DPMC 2021).

2.4.7 Back to the States

By 2019, all States except Western Australia had emissions-reduction targets in place, as had one of the two Territories, the ACT. Net zero by 2050 was the standard, with ACT aiming for 2045 (CCA 2019). To help achieve these goals, most jurisdictions had renewable energy targets in place by 2019. The most ambitious were Victoria, 40 per cent by 2025; South Australia (SA) 50 per cent by 2025; ACT 100 per cent by 2020. By 2021, all jurisdictions had committed to net-zero by 2050 or sooner (Cleary and Graham 2021).

While federally the Coalition had promptly abolished the centrepiece of Labor's climate change policy once they returned to office in 2013, Labor almost as promptly introduced a suite of emissions-reduction measures when they returned to power in Victoria the following year (DELWP 2016). Victoria's *Climate Change Act 2017* legislated a net zero target for 2050 and mandated a strategy to reach those goals along with requirements for 'Adaptation Action Plans'. This was supported by the closure of 'Australia's "dirtiest" power station', which burned brown coal and had been single-handedly producing 3 per cent of the country's total greenhouse gas emissions (Environment Victoria 2020). The State's 2021 plan

announced emissions-reduction targets of '28–33 per cent by 2025, and 45–50 per cent by 2030' together with a wide range of initiatives to achieve them (DELWP 2021; Malos 2021).

The renewables leader, though, has been South Australia, whose Labor government maximised opportunities provided by the Commonwealth's original MRET scheme to convert enthusiastically to renewables. With very limited coal supplies, ageing power stations, a considerable dependence on electricity imported from Victoria, and a transmission network and environment ideally suited to wind and solar generation, there was every incentive to do so (McGreevy et al. 2021).

If the results are anything to go by, these policies have been strikingly successful (Bourne et al. 2019). Twenty years ago, SA had 'no renewable energy production and imported around 30% of its electricity requirements from coal generators interstate. By 2018, it was generating 52% of its electricity from renewables and exported around 3% of its annual production interstate' (McGreevy et al. 2021). The ACT, meanwhile, was fully converted to renewable energy for its electricity generation by 2020. At the same time as being shamed for its slow progress on national emissions reduction policy, Australia has garnered more favourable international attention for making itself the world leader in rooftop solar as a result, in no small part, of these State-level initiatives (e.g., Albeck-Ripka and Penn 2020). Overall, they allowed Australia to reach its 2020 renewable energy target a year early (Stocks, Baldwin, and Blakers 2019). There is variation across the States, with resource-intensive Queensland and Coalition-controlled NSW being slower to act (Bourne et al. 2019). However, in 2020, even NSW broke with their Commonwealth counterparts and launched an ambitious renewables strategy that antagonised both the installed generators and their Canberra colleagues, particularly the National Party (Brown and Maddison 2020; Durie 2020; Williams 2020). By the time Labor lost office in South Australia, conversion to renewables was a fait accompli and fully accepted by the incoming Liberal government (McGreevy et al. 2021). The latest SA (2021, 18) action plan envisages 'a level of renewable energy that is more than 500% of current local grid demand by 2050'.

Somewhat slower to adopt emissions reduction targets was Western Australia – reflecting the fact that because of its large and growing natural gas industry it is the only jurisdiction whose emissions have maintained an upward trajectory (DISER 2021; Hare et al. 2018). Nonetheless, the sum total of State efforts – executed, in progress, and planned – is considerable. 'Current state and territory government 2030 targets combined are the equivalent of a national target of 37 per cent reduction below 2005 levels. This is well beyond the federal government's current 26–28 per cent national emissions reduction target' (Malos 2021).

2.5 Analysis and Assessment

In the first quarter of 2021, generation of electricity by black coal in Australia fell to its lowest level ever, while gas generation not only fell to its lowest level since 2005, but was exceeded for the first time by solar (AER 2021). Renewable energy sources were producing more than one-quarter of the country's electricity – substantially exceeding the original 20-per-cent-by-2020 target (CEC 2021). The leading source of GHG emissions in Australia is undergoing an accelerating transition from fossil fuels to renewables and as a result, according to one account, Australian emissions are peaking (Blakers and Stocks 2019).

How is this possible, when for all but six of the past twenty-five years Australia has been governed at the national level by political parties determined to do as little as possible to combat climate change? For many climate change activists, federalism is part of the answer, given the extent to which 'states and territories lead the way' (Climate Council 2021; also Edis 2019) – consistent with international experience (Schaffer and Bernauer 2014). The Commonwealth government's claim that 'Australia is on track to meet and beat its 2030 target' under the Paris Agreement (DISER 2020a) is in all likelihood disingenuous, it must be said – based on a sleight of hand around the inclusion of land-clearing changes and the effect of temporary events (Maraseni and Reardon-Smith 2019; Merzian and Hemming 2021). Emissions have been increasing across all the main sectors and, as a consequence, so have total emissions. The sole exception has been electricity generation, which reflects the scope for compensatory policy-making afforded by the country's federal system. Here we reflect how the three sets of federalism's strengths and weaknesses mooted in the introduction (Chapter 1) to this book have played out so far in Australian climate-change governance.

2.5.1 Federalism as Facilitator of Climate-Change Governance

Locally Tailored Response. With so much of climate change policymaking coming from the States, the result has certainly been a degree of policy diversity. However, this did not so much reflect the need to tailor policy to differing circumstances as much as the differing availability of resources and differing political pressures. There has been no particular advantage to federalism in this regard, since a uniform national policy such as that introduced by the Commonwealth in 2012 but soon shut down would have worked eminently well.

Compensatory Federalism. Much more evident in the Australian case has been the opportunity that divided jurisdiction provides for policy obstacles at one level to be circumvented by action at the other level, and for the States to play a catalytic

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role (Bernstein and Hoffman 2018). The dominance of the conservative parties at the national level has given Australia its reputation for being dilatory in regard to climate change. Labor governments in the States and Territories proved themselves ready, willing and able to initiate, enact, and implement emissions-reduction policies in compensation. There are obvious parallels here to the experience in the United States (Engel 2020; Thomson 2014).

We cannot pretend that this has occurred entirely in the absence of Commonwealth action: the introduction of the MRET, even if at very modest levels, prompted and facilitated State climate change policy; NSW then took the lead with its ETS and the States collectively then took up the baton and pushed the Commonwealth towards an emissions trading scheme (Jones 2014, 428–30) and towards a greatly increased renewable energy target. This might be seen as an instance of what Carlson (2009) calls 'iterative federalism', or Fisher (2013) 'boomerang federalism' – perhaps a more apposite term in the Australian context – whereby mutual reinforcement occurs between the central government and the constituent units. With the dominance of the conservative parties in Canberra since 2013 and the failure to replace the expired RET with a new regime in 2020, it has become a more straightforward case of State action compensating for Commonwealth government inaction. Has there been a downside to this? Whether it relieved pressure on the Commonwealth to take action is impossible to determine, but it seems unlikely.

Experimentation and Learning. It is difficult to find examples of genuine experimentation. The closest approximation was the introduction in NSW of an emissions-trading scheme, but that was only an experiment in the Australian context. As Engel (2015, 170–1) has concluded about climate change activism in the American States, there has been little need for policy innovation in emissions reduction; it is not coming up with new ways of doing things that has been the issue, but simply doing them.

Just as it is difficult to find evidence of policy innovation by the States, it is difficult to find evidence of genuine policy learning or the diffusion of good ideas. States typically rushed into similar policies together (such as feed-in tariffs), or took actions that reflected their own circumstances and politics, as appears to have been the case in other areas of environmental policy making (Hollander 2013, 142).

2.5.2 Federalism as Hindrance

Veto Points? Divided jurisdiction did not create jurisdictional obstacles to national action in Australia. It was the least of the problems facing the Rudd and Gillard federal Labor governments in the carbon tax years and has not prevented the States from implementing a range of mitigation policies. Strong bicameralism did play a

role in constraining policymaking by the Commonwealth, but that was not a function of Australia's federal system, rather it was a function of what has been called Australia's 'semi-parliamentarism' (Ganghof, Eppner, and Pörschke, 2018).

Patchwork of Policies? This is in part the perennial complaint that federalism is messy: plagued with policy gaps, inconsistencies, and redundancies. It goes beyond that, however, to suggest that shirking or free riding will undo the efforts of others (Gordon 2015). As noted in the Introduction (2.1) above, one school of thought holds that climate change mitigation will be stymied unless governments work together. 'Without intergovernmental cooperation there will be no success' (Jones 2009, 17).

The fact that States demonstrated varying levels of passion for emissions-reduction means that the aggregate effect has not been as great as it might, but it did not create any perverse dynamics in Australia. To the extent that there were laggards this diminished the overall mitigation effort; contrary to Gordon's argument, though, it did not in any way negate the efforts of the leaders.

It is quite possible that practical mechanics makes coordination desirable or even necessary in some instances. As we saw, the States worked hard to develop a coordinated pan-Australian ETS before the Commonwealth government changed hands to Labor in 2007. Similarly, the incoming Labor government worked closely with the States to develop its ETS, although that operated only briefly. Much has been accomplished, though, via individual, non-coordinated, State action. Given that Australia's electricity networks are still predominantly State networks – notwithstanding the NEM – there is little reason why much emissions-reduction policymaking in that sphere cannot occur on a State-by-State basis and be effective. Indeed, right up until its defeat in May 2022, the incumbent Commonwealth government continued to work at cross-purposes with the States, while the shift to renewables only seemed to gain momentum.

Collective Action Problems? The fact that no individual jurisdiction could make a significant dent on the problem seems to have done little to discourage State governments from embarking on often-ambitious mitigation policies in Australia.

2.6 Conclusion

As Weaver (2020) notes, the way federalism affects policymaking is highly contingent – the consequence of a variety of potentially reinforcing or neutralising causes. In the case of Australian climate change governance, federalism provided opportunities for policymaking that would not have been available in a unitary system with a national government likewise unfavourably disposed. Moreover, it did so with the States acting, to a large extent, autonomously. This reflected the

character of Australian federalism, Australia's political economy and economic geography, partisan alignments, and the nature of the issue itself.

To conclude that federalism has facilitated climate change governance in Australia is not to argue that the outcome has been 'better' than it might have been under a well-coordinated approach, or if the Commonwealth had taken strong unilateral action via a carbon tax. After all, some of the key State policies were undoubtedly far less efficient (e.g., VAGO 2021). Nor is it to argue that this occurred in the absence of Commonwealth action altogether – it didn't. It is to argue, though, that under the circumstances, federalism provided a context for climate change mitigation that would not have occurred otherwise.

This required that the States have sufficient jurisdictional capacity, which they demonstrably do. It also required that, as a whole, the States and Territories were disposed to take action. As the Canadian case shows, one jurisdiction whose economic welfare is tied to large and increasing emissions can swamp the mitigation efforts of all the others (Harrison 2013, S107; Macdonald 2020, 98). Australia's political economy is much less fraught. In addition, while burdened with enormous coal and gas reserves, the country is also blessed with extraordinary solar- and wind-power potential and able to reap the benefits of the rapidly declining costs of those technologies. Whether the States and Territories can play a similar role in reforming other high-emissions sectors is the next question.

Notes

1 More recent figures have been distorted by the subduing effect of the Covid-19 pandemic.
2 The coal and gas imported from Australia by other countries, China among them, produces three times as much emissions as Australia's entire domestic output (AATE 2020).
3 To confuse things, there is also the Australian Energy Regulator (AER), an agency of another agency, the Australian Competition and Consumer Commission (ACCC), which polices the rules; the Australian Energy Market Commission (AEMC), with makes the rules; and the Energy Security Board (ESB), established in 2017 to oversee strategic change pursuant to the report of the Independent Review into the Future Security of the National Electricity Market – the 'Finkel Review' – *Blueprint for the Future*.
4 In the middle of March 2020, first ministers' meetings were re-styled 'National Cabinet', escalated in frequency and regularity, and took on a more collegial character. This was welcomed by the States (e.g., Victoria 2020) and not much later the PM declared that the arrangement would supersede COAG altogether.
5 WA is extraordinarily dependent on resources, which contributed $135.3bn of the State's $316.3bn GSP in 2019. While a significant portion of that was natural gas, by far the largest part was iron ore, gold, and aluminium, and in total the State contributed fully half of Australia's goods exports (DJTSI 2021). Alberta's great resource, meanwhile, is its enormous body of tar sands – exploitation of which is not only difficult and expensive, but energy and emissions intensive.
6 2018 and 2017 figures respectively. Queensland's emissions have increased since then, driven in particular by the growth of LNG exports. WA has a similar share of the population as Alberta but 'only' produces 17 per cent of Australia's emissions.
7 Inspired by Canada's Council of the Federation, CAF was active for a couple of years, but fell into desuetude once Labor took office in Canberra and lost office in some of the States.
8 The PM did eventually commission a 'Task Group on Emissions Trading', but losing office made that moot (PMTGET 2007).

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