RENEWABLE ENERGY AND CLEAN TECHNOLOGY

Pavel Molchanov | (713) 278-5270 | pavel.molchanov@raymondjames.com

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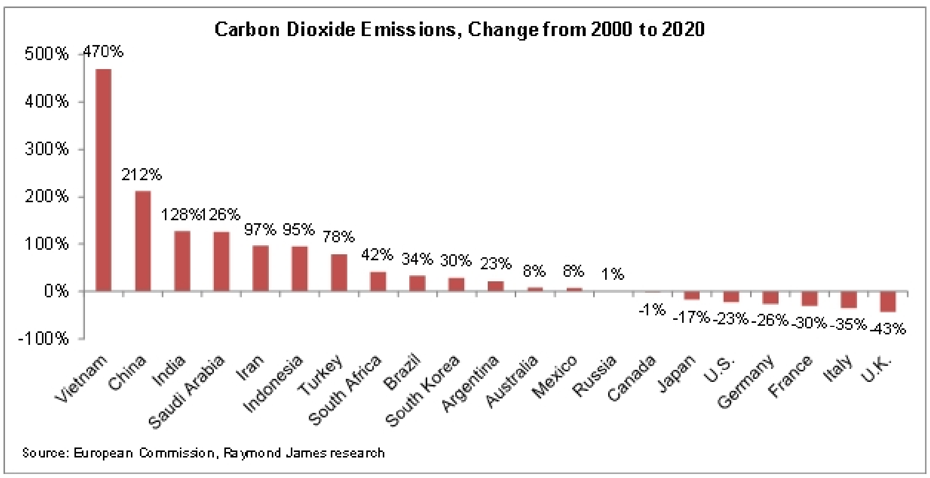
INDUSTRY BRIEF

Energy Stat: Australia Poised for New Government, Climate Policy Changes on Deck... Who Are Winners and Losers?

With Russia's invasion of Ukraine entering its third month, the war's effects – ever-widening sanctions and a fundamental rethink of energy security – continue to be the overriding geopolitical story vis-a-vis energy. While nothing approaches the war in sheer impact, there are other political events to watch, and today we will turn our attention to Australia's federal election coming up on May 21. This topic is surely below the radar for most of our readers, but as it relates to climate and energy policy, it is arguably the world's most important election of 2022. This report is being published in advance of an investor call that we will host this Thursday (contact us for dial-in details) with David Bassanese, Chief Economist at Sydney-based BetaShares Capital. The key point is that the Labor Party is poised to win power for the first time since 2013, which points to more ambitious climate action in a G20 economy that has historically rivaled the U.S. for the dysfunction and weakness of its environmental policies. However, policy is **not** everything. Australia's decarbonization is already underway, and our baseline forecast is that non-hydro renewables will surpass coal to become the largest portion of the electricity mix by 2030. If there were to be a stronger push from Canberra, it would further accelerate energy transition in electric power and transport. We conclude the report with a discussion of how various companies are positioned vis-a-vis the election outcome.

The big picture: Australia is one of the few industrialized countries with CO_2 emissions that are UP since 2000.

Australia is famous for its beaches, koalas, and (more recently) some of the world's strictest COVID containment policies. But Australia also stands out for the fact that its CO_2 emissions have increased since 2000. That is exceptionally rare among industrialized countries.



Australia's resource-centric economy makes it very similar to Canada, somewhat comparable to the U.S., but a stark contrast versus, for example, Japan or France. Just as extractive industry lobbyists have considerable influence on what policymakers do in Ottawa and Washington, the same is true of Canberra. In fact, Australia and the U.S. are currently the only large industrialized countries without a national carbon pricing policy.

Australia's political dysfunction over climate policy has claimed the careers of three recent prime ministers.

By way of background, Australia has two dominant parties: Labor Party (center-left) and Liberal/National Coalition (center-right). Elections must be held at least once every three years, and it is also easy to change party leaders mid-course (what's called a "leadership spill"), so power changes hands more frequently than in virtually all other parliamentary systems. In this context, Australia is the rare example of a country that implemented a carbon tax — and then ended it shortly afterwards.

In 2011, a Labor government, led by Prime Minister Julia Gillard, approved the tax. This policy became a major point of contention in the 2013 election, which brought the Coalition, led by Tony Abbott, to power. The tax was repealed in 2014, but Abbott himself did not last long. In 2015, his own party replaced him with the more moderate Malcolm Turnbull — in part because Turnbull criticized Abbott's lack of action on climate. But then in 2018, the party toppled Turnbull and flipped back to a more hardline leader, Scott Morrison — with this leadership change relating in large part to climate policy, specifically a proposal called the National Energy Guarantee. Confused yet? The big picture is that climate has

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been, and remains, at the heart of Australia's volatile political dynamics. This was certainly true of the 2019 election campaign, marked by intense debate between the Coalition and Labor over how to approach decarbonization. The Coalition narrowly won that election, but its eight-year hold on power at the federal level is coming to an end. According to current opinion polls, Labor is poised for victory on May 21. Accordingly, Anthony Albanese, the current Labor leader, is set to be the next prime minister.

Despite the lack of a regulatory push, coal is losing ground in Australia’s electricity mix, as is happening in the rest of the world.

Australia is well-known for its coal mining industry, with the world’s fifth-largest coal production in 2020 — remarkably, almost overtaking the U.S. More than three-quarters of those volumes are exported — until last year’s diplomatic kerfuffle, China had been a key market — but Australia itself has also historically had a coal-centric electricity mix. Well, that is changing, slowly but surely.

Electricity consumption in Australia is essentially flat – in common with other industrialized countries – which means that the electricity mix is a zero sum game. Coal is losing share, and non-hydro renewables (mainly wind and solar) are capturing almost all of it. Sound familiar? That’s because this same general trend is playing out worldwide: it is purely a matter of degree. There has never been nuclear power in Australia, and natural gas and hydro are on a plateau. The math is almost perfectly balanced: between 2010 and 2020, coal’s share dropped 16%, and non-hydro renewables gained 16% – the latter equating to a 6x increase.

How much worse can it get for coal in Australia? A lot worse. From the 2020 level of 54%, we forecast coal’s share dropping to 36% by 2030. This would still be higher than our forecasted global average of 26%, but a cut of nearly half within 20 years is certainly needle-moving. And, to be clear, this assumes policy status quo. Which brings us to...

Australian Power Generation (TWh)

	2010	2015	2020	2025E	2030E
Coal	176	162	143	123	101
% Share	70%	64%	54%	45%	36%
Natural Gas	47	50	53	54	55
% Share	19%	20%	20%	20%	20%
Nuclear					
% Share	0%	0%	0%	0%	0%
Conventional Hydro	14	14	15	14	13
% Share	5%	6%	5%	5%	5%
Non-Hydro Renewables	8	22	50	78	107
% Share	3%	9%	19%	29%	38%
Other	5	5	4	3	2
Total	**251**	**254**	**265**	**273**	**279**
% Change		**1%**	**4%**	**3%**	**2%**

Source: BP Statistical Review, Raymond James research

A Labor government would implement significant climate reforms, albeit NOT going as far as environmentalists would want.

Shortly before the COP26 climate conference in November 2021, Morrison responded to international pressure by announcing a target of net zero CO_2 emissions (carbon neutrality) by 2050. However, as with the vast majority of such targets around the world, this one is **not** legally binding. Accordingly, an important shift under Labor could be to enact net zero in legislation – as the European Union, Japan, South Korea, Canada, and the U.K. have already done. It is unclear whether Albanese wants to do this, though he may have no choice if he wants to get parliamentary support from the small but influential Green Party.

Beyond the headline CO_2 target, Labor plans to align energy transition policy and jobs policy: a textbook example of using “carrots” rather than “sticks”, much like the Biden administration’s approach. A National Reconstruction Authority, funded with A$15 billion, would provide seed grants, loans, and loan guarantees to businesses in various industries, with green technologies playing a key role. In addition, a A$20 billion Rewiring the Nation program would modernize the electric grid, with an emphasis on supporting the mainstreaming of wind and solar. As it stands, Australia’s uniquely spread out population base helps explain why the grid routinely suffers from supply/demand imbalances. The vast majority of Australians live in five metro areas – Sydney, Melbourne, Brisbane, Perth, and Adelaide – and the massive distances between them have historically resulted in a disjointed grid. This is especially true of South Australia (capital: Adelaide), the state with the highest penetration of non-hydro renewables: upwards of 60%, which is 3x the national average. On a smaller scale, the Power to the People initiative, with a price tag of A$200 million, would build 400 “community batteries” of approximately 500 kWh each, with the aim of supporting distributed generation.

Adoption of electric vehicles has been very slow in Australia. In 2021, EVs (including plug-in hybrids) comprised a mere 2.4% of light-duty auto sales, as compared to the global average of 8%. Labor’s response is the Electric Car Discount policy: exempting EVs from import tariffs (5%) and, more importantly, the fringe benefits tax (47%). A cash rebate or tax credit – along the lines of what most major economies have – would arguably be even more effective, but the Electric Car Discount is certainly better than the status quo of nonexistent federal support for EVs.

The aforementioned influence of extractive industries in Australian politics means that there are some things that a Labor government will **not** do. There is no plan for a national carbon tax or a broad-based cap-and-trade program. The unpleasant memories from the past decade still linger, and Labor has no appetite to relitigate that. Instead, Labor plans to continue the existing policy, known as the "safeguard mechanism". This is a watered-down version of cap-and-trade, applying only to the very largest CO_2 emitters, those emitting more than 100,000 tons per year, around 140 in total. Companies that overperform their decarbonization quotas are able to sell credits to those that underperform. Likewise, there is no plan for Australia to join the 48 countries in the Powering Past Coal Alliance in implementing a legally binding coal power phase-out. (Sydney, Melbourne, and the Australian Capital Territory are members of this group, but they have no coal-fired power plants anyway.)

How would the new policy framework affect various companies?

As a caveat, let's again emphasize that Australia's climate policy is very much a work in progress. How much Labor can accomplish will partly depend on the scale of its parliamentary majority. As compared to the era of Coalition governments since 2013, it is a safe bet that regulatory pressure on CO_2 emissions will increase under Labor. Regulatory costs for emissions reduction (the goal of the safeguard mechanism) will likely rise, though it is hard to imagine them reaching the levels of the European Union, or even nearly New Zealand. This is relevant for top-tier players in aluminum smelting (e.g., Rio Tinto, Alcoa, Tomago); mining (e.g., BHP, Glencore, Fortescue); as well as oil and gas, including LNG (e.g., Chevron, Conoco, Woodside, Santos). Concurrently, as coal continues to lose share in Australia's electricity mix, coal mining will aim to orient even more towards exports.

Providers of low-carbon technologies will welcome Labor's more active stance on decarbonization. From the standpoint of most of our readers, the challenge here will be finding investable ways to play this theme, bearing in mind that Australia's power generators – whether renewables-focused or otherwise – do **not** have U.S. listings. They are listed exclusively on the ASX (e.g., AGL Energy, Origin Energy); subsidiaries of international companies (e.g., Iberdrola, Meridian Energy); or government-owned enterprises (e.g., Hydro Tasmania, Snowy Hydro).

Among international providers of wind and solar equipment, many have a foothold in the Australian market. Vestas has a wind turbine manufacturing facility in Victoria, and Siemens Gamesa and Suzlon have also been involved in Australian wind projects. TPI Composites (TPIC), which supplies wind blades to Vestas and Gamesa, similarly stands to benefit from any expansion in Australian wind installations. First Solar (FSLR), JinkoSolar (JKS), Canadian Solar (CSIQ), and Maxeon Solar (MAXN) are among the PV module suppliers with a history of selling in Australia. In contrast to the long, convoluted history of solar protectionism in the U.S., Australia does **not** impose specific tariffs on imported modules. Australia is known for having the world's highest penetration of rooftop solar – approximately 25% of single-family homes, 6x the level of the U.S. – but there are utility-scale newbuilds as well, which creates demand for trackers from Array Technologies (ARRY), FTC Solar (FTCI), and Nextracker (part of FLEX). For commercial buildings looking to deploy solar in a creative way, Perth-based ClearVue Technologies (CVUEF) provides building-integrated photovoltaics for windows.

In the Australian EV market, even modest acceleration in the adoption curve will create opportunities for the major automakers – especially Asian ones, which are the long-standing sales leaders in Australia. Privately held BusTech Group, Australia's leading bus manufacturer, has partnered with U.S.-based Proterra (PTRA) to produce electric buses at a new facility in New South Wales. With more EVs on the road, this will boost demand for EV chargers, and here there is a rare example of an Australian clean tech company with a U.S. listing: Brisbane-based Tritium DCFC (DCFC). Finally, power storage providers with a history of selling in Australia include Enphase Energy (ENPH) and SolarEdge Technologies (SEDG) in the rooftop market; and Fluence Energy (FLNC) and LG Energy Solution in the utility-scale market.

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Company Name	Ticker	Exchange	Closing Price	RJ Rating	RJ Entity
Chevron Corporation	CVX	NYSE	$160.95	MO2	Raymond James & Associates
ConocoPhillips	COP	NYSE	$96.01	SB1	Raymond James & Associates
Enphase Energy, Inc.	ENPH	NASDAQ	$153.63	MP3	Raymond James & Associates
First Solar, Inc.	FSLR	NASDAQ	$72.37	MP3	Raymond James & Associates
Flex Ltd.	FLEX	NASDAQ	$16.53	MP3	Raymond James & Associates
Fluence Energy, Inc.	FLNC	NASDAQ	$9.39	MP3	Raymond James & Associates
FTC Solar, Inc.	FTCI	NASDAQ	$3.03	SB1	Raymond James & Associates
Maxeon Solar Technologies, Ltd.	MAXN	NASDAQ	$11.34	MO2	Raymond James & Associates
TPI Composites, Inc.	TPIC	NASDAQ	$12.03	SB1	Raymond James & Associates

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