



EXPLORE

INVEST

ACCELERATE

Australian Renewables
Report 2023



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Contents



Foreword

The global movement to go green is picking up pace – and Australia is positioning itself well to be a leader in clean energy adoption.

Recent figures and political developments attest to this change and commitment.

In 2022, construction commenced on more than 5,000MW of new large-scale wind and solar farms – the highest level on record. Likewise, investment in renewables projects and infrastructure (US\$33bn) and M&A (US\$17.4bn) in Australia, both soared to new records.

On the policy front, renewables are now at the heart of government planning. Support for clean energy is tangible: since coming to power in May 2022, the Federal government has legislated to cut emissions and committed AU\$25bn to boost clean energy, including grid upgrades. Recent initiatives include Hydrogen Headstart, an AU\$2bn plan to support large-scale green hydrogen production.

Aside from the increasingly favourable policy environment, Australia offers a wide range of renewable opportunities for investors. In addition to utility-scale electricity generation via wind and solar, there are investments to be found in supporting infrastructure, services and supply chain assets. Specific examples include battery storage, software and innovative construction systems. This speaks to the growing depth and maturity of Australia's renewables ecosystem.

As 2023 continues to unfold, investors are wondering what the future of this dynamic sector has in store. Many are keenly aware of the challenging landscape confronting them today and in the near term.

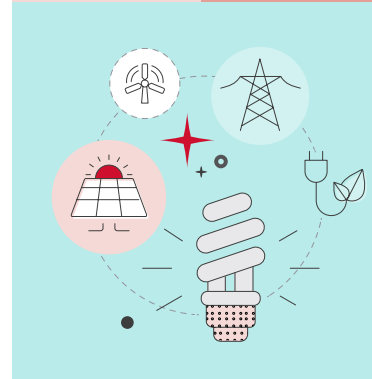
Inflation and higher interest rates are undoubtedly creating a tougher environment for investors in Australia, as they are elsewhere in the world. Financing deals and agreeing on valuations is becoming more challenging. On top of this are questions about the impact of the US Inflation Reduction Act (IRA) and its European equivalent, the Green Deal Industrial Plan. With support

and incentives for clean technology worth a combined US\$641bn, the risk of investors being lured away is real.

Yet, regardless of these concerns, the strength of Australia's fundamentals and rich renewable landscape has given investors new confidence in the green energy story here. Indeed, in our survey of global renewables investors this year, nearly three-quarters of respondents say they will increase investments in Australia through 2023. These were the highest percentages in our three years of conducting this research.

Particularly among offshore investors, interest has remained strong. The proportion of North American respondents who plan to invest in Australia (67%) has nearly doubled since 2021 (35%). European investors are also looking to increase their allocations.

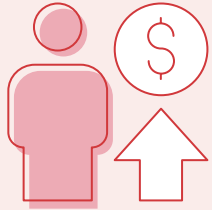
All of this bodes well as Australia races to achieve its goal of becoming a renewable energy superpower. Investors have everything to play for.



Nearly **three-quarters of respondents say they will increase investments in Australia through 2023.** These were the highest percentages in our three years of conducting this research."

Simon Scott
Energy and Resources Lead
MinterEllison

Key findings



74%

of respondents say they will increase investments in Australian renewables through 2023 – the highest positive sentiments to date.



65%

say achieving economies of scale is the key objective of future investments in Australian renewables.



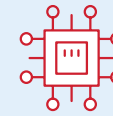
Other strategic priorities for investors:



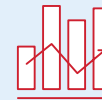
Industry consolidation



Bolt-on or transformational acquisitions



Acquiring new tech and/or IP



Inorganic growth via acquisition



65%

say their recent renewable energy investments in Australia yielded the intended value from the deal or met their business objectives.

Australia's key strengths



Funding and investment opportunities and return on investment



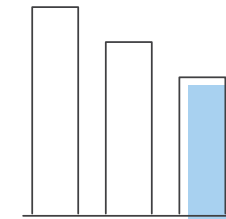
Greenfield project opportunities



Government renewable and emissions reduction targets

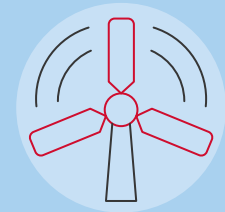


Legal certainty and regulatory stability



55%

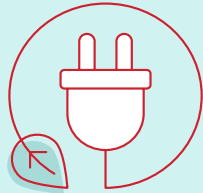
say Australia has a lower risk profile for renewables investments than other markets.



Key findings

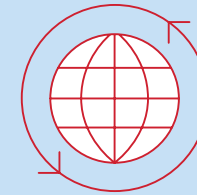
85%

say federal and state policies will be supportive towards the renewables sector in the next 12-24 months.



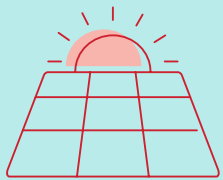
73%

say valuations being too high will be the biggest challenge for investors over the next 12 months.



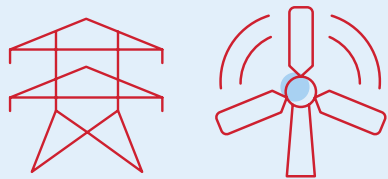
53%

are concerned about financing difficulties, although many say Australia will rank among the top countries for a supportive financing environment for renewables projects in 12 months' time.



PV solar

remains the most attractive sub-sector – although large numbers also say hybrid batteries and biomass/biogas/waste-2-energy have the most opportunities.



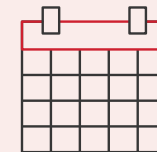
37%

say accessing the grid is getting easier, especially compared to two years ago.



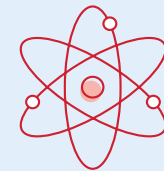
Geothermal

ranks as the top risk sector, followed by hydrogen.



91%

of all respondents expect investment from Asia Pacific to increase in the next 12-24 months, compared to investment from Europe (83%) and from North America (57%) in the same period.



46%

say hydrogen technology and implementation will catch up with expectations and/or reach a point of industry maturity within the next 2 years.

Onward and upward: Sentiment towards Australian renewables is stronger than ever

Investors are sending strong and clear signals that Australia will play a key role in their global renewable energy strategies.

Confidence in the Australian renewable energy story has never been higher. Nearly three-quarters of respondents (74%) say they will increase investments in Australia through 2023 – a sharp uptick from 65% in our 2021 study and outpacing the 68% in 2019 (Figure 1).

These opinions track well with activity in the market over the past two years. Following a drop in investment in renewable energy infrastructure projects from 2018 through 2020, transaction volume and values began a steep and prominent rebound, reaching record heights in 2022 (Figure 2). The same rebound held true for M&A trends, which we discuss on [page 15](#). If sentiment remains favourable and investment continues to trend upwards, 2023 could see yet another record year.



Figure 1. Are you planning to increase, decrease or not change your current level of investment into Australia in the next 12 months?

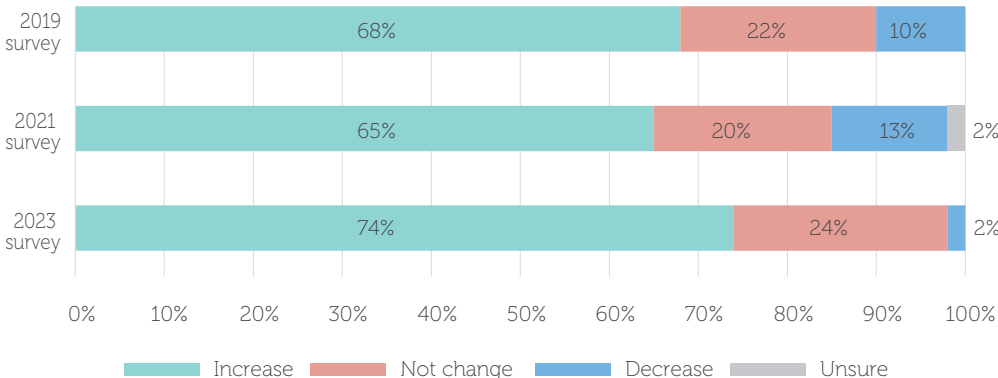
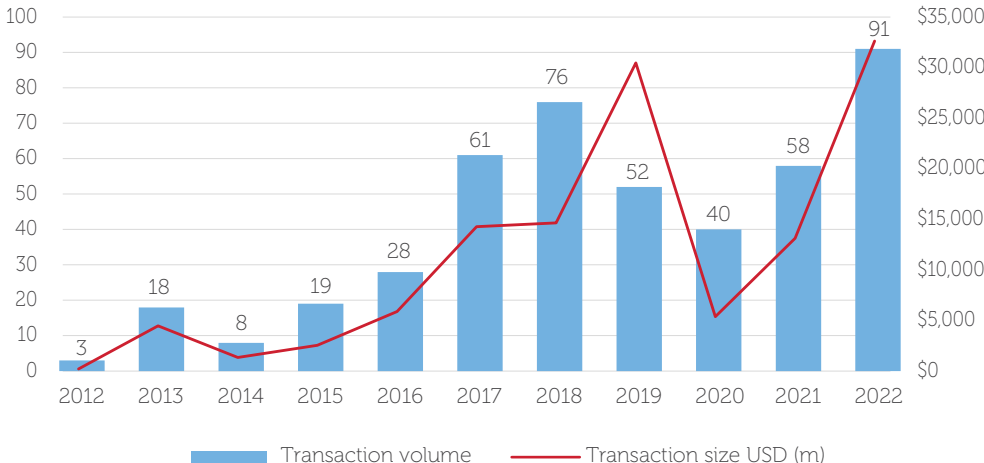


Figure 2. Australian infrastructure (renewable energy) transaction trends



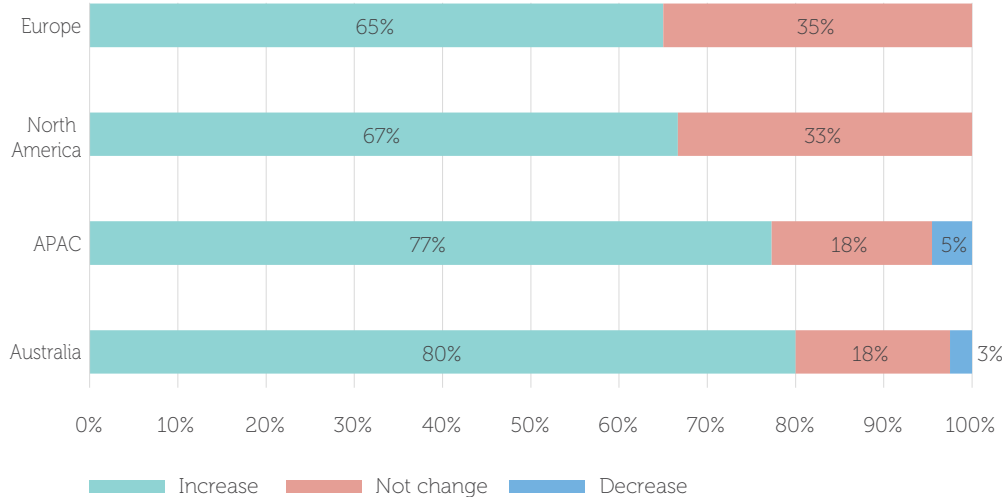
**Onward and upward:
Sentiment towards Australian renewables is stronger than ever**

Unleashing investment: Domestic and offshore intentions

Domestic investors are poised to be the dominant market players in the year ahead, with 80% of Australian respondents saying they will increase investments (Figure 3). Yet, inbound investors also show robust interest. In line with our 2021 study, respondents from Asia Pacific stand out with 77% planning to increase investments.

More noteworthy, however, is the marked improvement in positive sentiment from both North America and Europe. For North American respondents, 67% say further investments are likely – up from only 35% in 2021. European investors are likewise keen to open the investment taps. Nearly two-thirds (65%) expect to increase investment – and, again, this is up sharply from only 43% in 2021.

Figure 3.
Are you planning to increase, decrease or not change your current level of investment into Australia in the next 12 months?



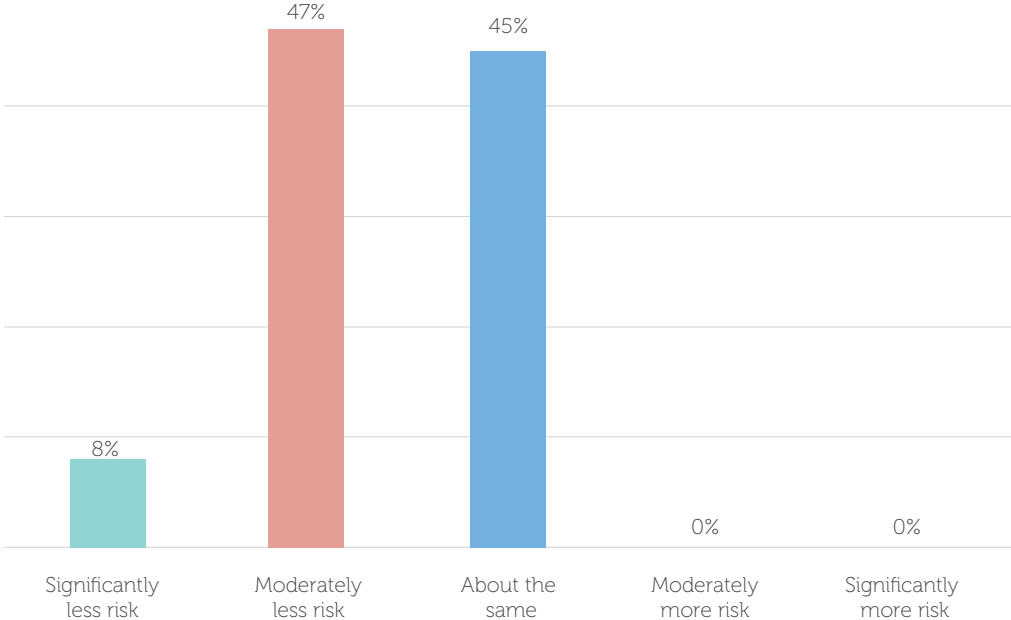
Australia's key strengths

Australia boasts a number of advantages that make it a competitive market and compelling option for global renewables investors:

Low risk

More than half of respondents (55%) say there is less risk associated with investing in Australian renewables compared to other global markets with the other 45% saying the risk is about the same (Figure 4).

Figure 4. How would you rate the risks associated with investing in Australian renewables compared to other overseas/global markets?



Australia's key strengths

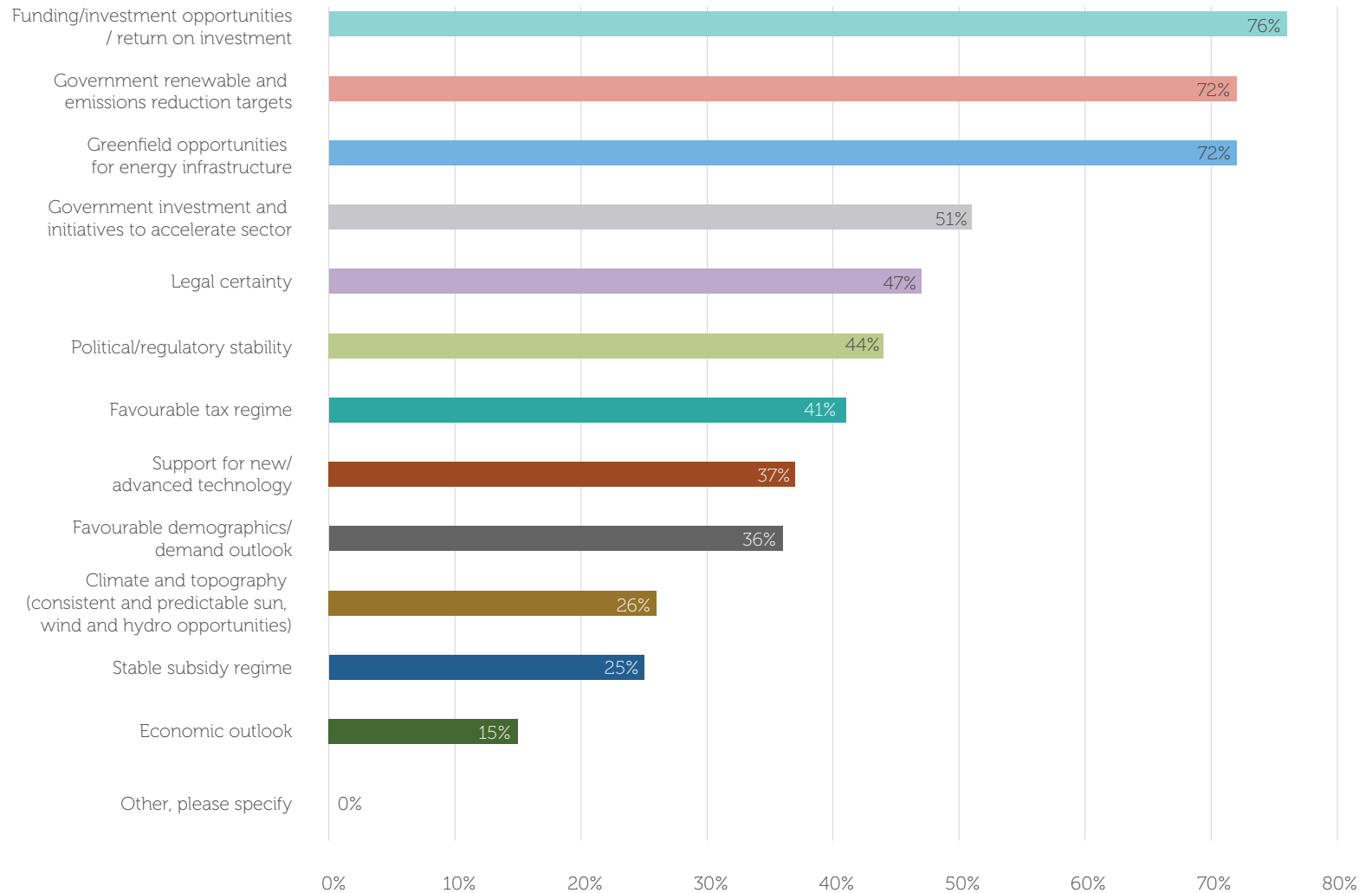
Funding and investment opportunities

Australia's renewable energy sector presents a compelling investment story with significant potential for funding and comparatively attractive returns on investment (ROI).

As the country continues to transition away from traditional fossil fuels, the industry has experienced rapid growth and offers a favourable investment landscape – and 76% of respondents point to these as the top factors making Australia an attractive location for renewable energy investment (Figure 5).

Figure 5.

What makes Australia attractive for investments into renewable energy?



Australia's key strengths

Greenfield projects

Although not without challenges, the country's vast landmass and favourable climate conditions make it ideal for the construction of new solar and wind farms. These greenfield projects offer investors the chance to establish a foothold in the rapidly growing renewables market, capitalise on government incentives and support, and contribute to the country's clean energy transition. The greenfield approach allows for greater flexibility and customisation, enabling innovative and efficient renewable energy solutions.

Government commitments

Many also point to government renewable and emissions reduction targets (cited by 72%). Meanwhile, government efforts to accelerate the renewables sector (mentioned by 51%) also score highly. Indeed, the government's commitment to clean energy targets is a compelling draw. The Australian government has set ambitious goals to generate 50% of the nation's electricity from renewable sources by 2030. This commitment provides a stable and supportive regulatory environment, fostering investor confidence and reducing policy risks.

Wholesale power prices

These are broadly still expected to increase as coal retires from the NEM, providing a supportive commercial backdrop.

Legal certainty and political stability

While somewhat smaller shares of respondents say legal certainty (47%) and political/regulatory stability (44%) are key attractions, qualitative responses suggest these topics are uppermost in the minds of some: "Political stability is one of the reasons for selecting Australia as an investment destination. Markets in Europe are becoming more risky due to political instability," says the Head of Renewable Energy at a US-based fund.



States and territories: All eyes on New South Wales

New South Wales (60%) scored highest among Australian states and territories as providing an attractive opportunity for future investments (Figure 6).

Aside from the size of its domestic market (with more than 8 million people, it is Australia's most populous state), New South Wales has a longstanding record of backing renewables and it was one of the first jurisdictions in the world to set a net-zero objective. Likewise, there is also significant opportunity in offshore wind: the offshore geography, existing deepwater ports and supporting industries have potential to birth the emergence of a genuine offshore supply chain.

"I would say that government support is better in New South Wales," says the Head of M&A at a UK-based energy company. The local communities are also involved in wind and waste to energy projects. These factors will drive better investment opportunities in the future."

Only one other state – Victoria – garnered more than 10% of respondents' votes in terms of being an attractive investment opportunity. Queensland, Tasmania, Western Australia and South Australia achieved only single-digit support.

Despite this, all of these states are seen as having something to offer investors. Storage and export potential is a common theme – particularly in respect of Tasmania, which was the first Australian state to achieve 100% renewable electricity generation. It now has a renewable energy target of 200%. "The most attractive opportunity is available in Tasmania," says the Director of a US-based bank. "There will be opportunities in energy storage, and we will see good returns as transmission connectivity increases."



New South Wales remains a key market. The Renewable Energy Zones, particularly Central-West Orana and New England, will provide the backbone for massive forward investment in generation, firming and storage, and provide a clear investment signal. The LTESA option product is innovative, acts as insurance against downside pool price scenarios, and potentially both increases bankability and delivers a superior outcome for consumers."

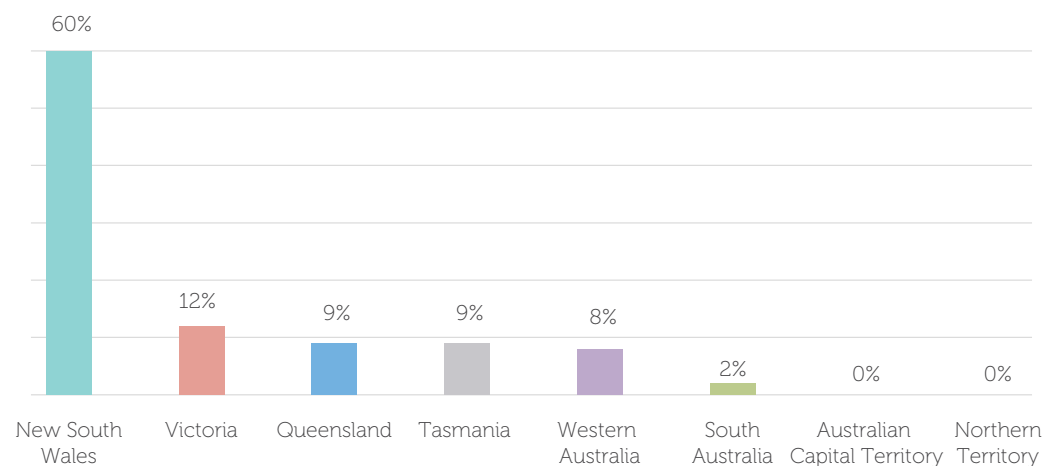
Simon Harvey, Partner – Construction and project development



In the nascent offshore space, given the significant capex requirements and the limited number of feasibility licences expected to be awarded, we expect to see a high level of joint venturing, co-investing and secondary investing into Australia's offshore wind generation sector as the first rounds of the Victorian and New South Wales tender processes conclude in the next 12 months."

Sebastian Rosholt, Partner – Mergers & Acquisitions

Figure 6. What Australian state or territory provides a more attractive investment opportunity for your future renewable investments?



Forecasting success: How investors are yielding maximum value from their green investments in 2023

Speaking further to the prospects and quality of Australian renewable assets, most respondents (65%) say that recent investments were successful – and 21% say deals were very successful (Figure 7).

“We were very successful in yielding the intended value,” says the Chief Investment Officer of an Australia-based fund, who went on to say that these results have given his firm renewed confidence to proceed with more ambitious deals.

Diving deeper into the commentary and research findings, respondents highlight the steps, strategies and features of the deal process that led to these resoundingly positive outcomes:

Due diligence: Going digital yields results

Investors are placing greater emphasis on conducting comprehensive investigations before entering into renewables deals. This includes assessing the project’s financial viability, regulatory compliance, technical feasibility, and potential legal and commercial risks – all of which have become more complex as projects become larger in scale over time.

That being said, a significant proportion of respondents (38%) report that due diligence is actually getting easier in Australia (Figure 8). “The process is not as difficult as it was 12 months ago,” says the Director of an Australia-based bank. “The impact of the pandemic has decreased and operations are running smoothly.” Increased uptake of technology is one of the factors in play and many respondents make reference to the use of digital solutions, among them artificial intelligence (AI), Virtual Data Rooms (VDRs) and collaboration tools.

Figure 7.

How successful was your most recent renewable energy investment in Australia in yielding the intended value from the deal or achieving business objectives?

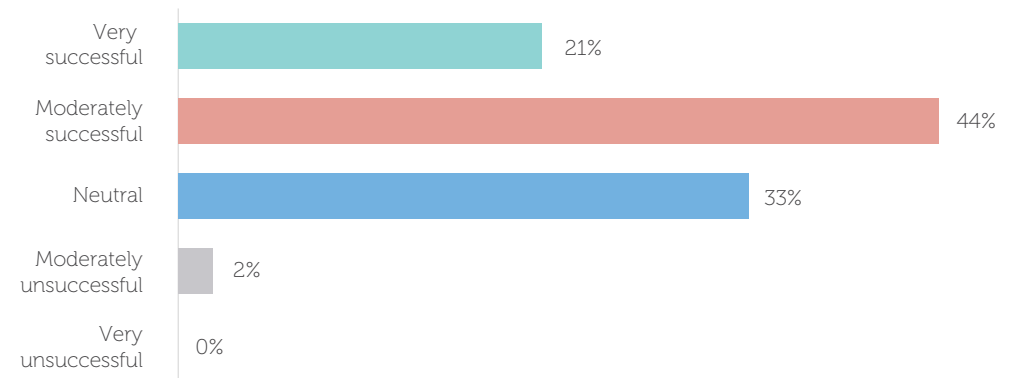
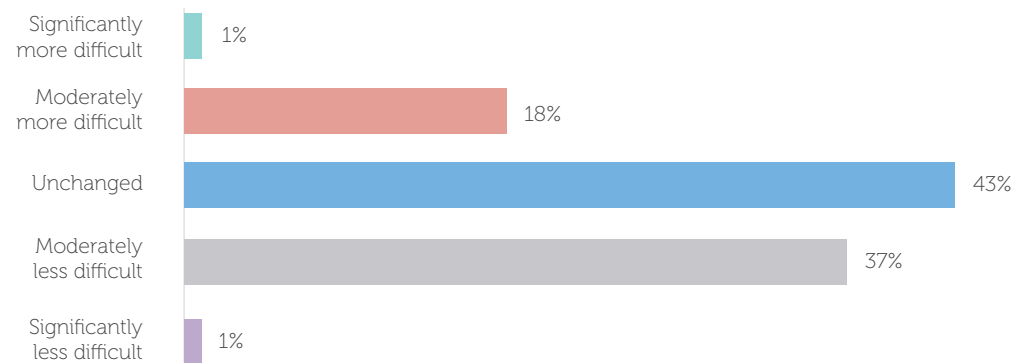


Figure 8.

How difficult is it to complete due diligence in the current environment compared to 12 months ago?



Forecasting success: How investors are yielding maximum value from their green investments in 2023

Faster timelines: Planning pays off

Almost half of respondents (42%) report that investments completed in about the same time as in prior years, while 37% say they completed more quickly than previous deals (Figure 9). "In comparison to prior years, the dealmaking conditions were favourable for us because we were well prepared," says the Head of Acquisitions at an Australia-based energy firm. "We had planned the financing and due diligence aspects well in advance."

Deal teams: Collaboration is key

Investors are also placing a greater focus on the deal team – and an increasing number are tapping into local expertise to help them navigate the investment environment and handle negotiations. "We used local guidance more often in our most recent transaction," says the Head of M&A at a Spain-based energy company. "They were able to provide more insights about the risks. Procuring relevant data during due diligence was also easier."

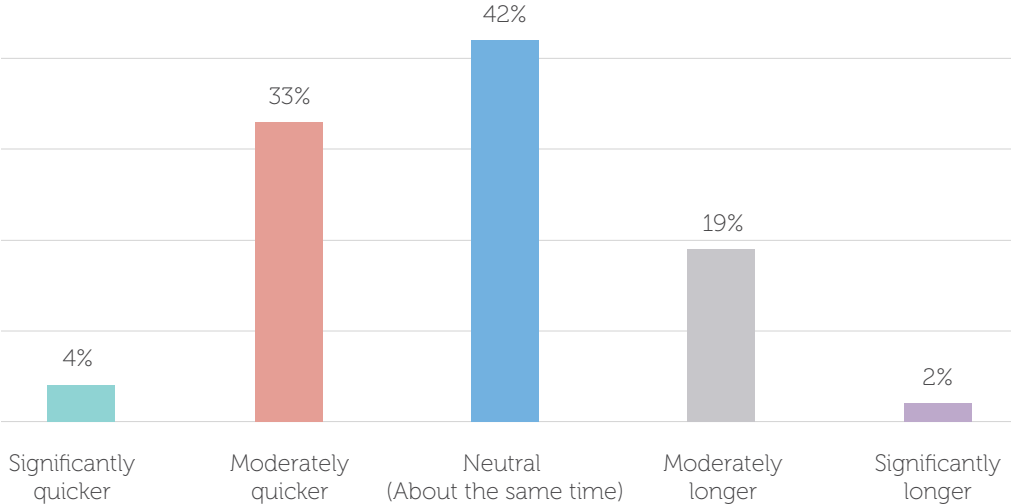
Missing the mark

Respondents who faced difficulties or missed targets in their recent renewables deals point to a number of pitfalls that other investors must be aware of. For one, when deals took longer than expected, investors say that delays in government approvals, ESG data discrepancies and agreeing on valuations were to blame.

Challenges to conducting and completing due diligence were the result of failing to engage with experts who had the right credentials and industry connections.

"We did not find the right advisers on time," says the CFO of a UK-based energy company whose last deal took longer than usual. "The advisers that we used did not have much expertise dealing with investments in renewables."

Figure 9. Thinking about your last renewables investment in Australia, how long did it take to complete in comparison to prior years?



Investment strategies: The race for scale

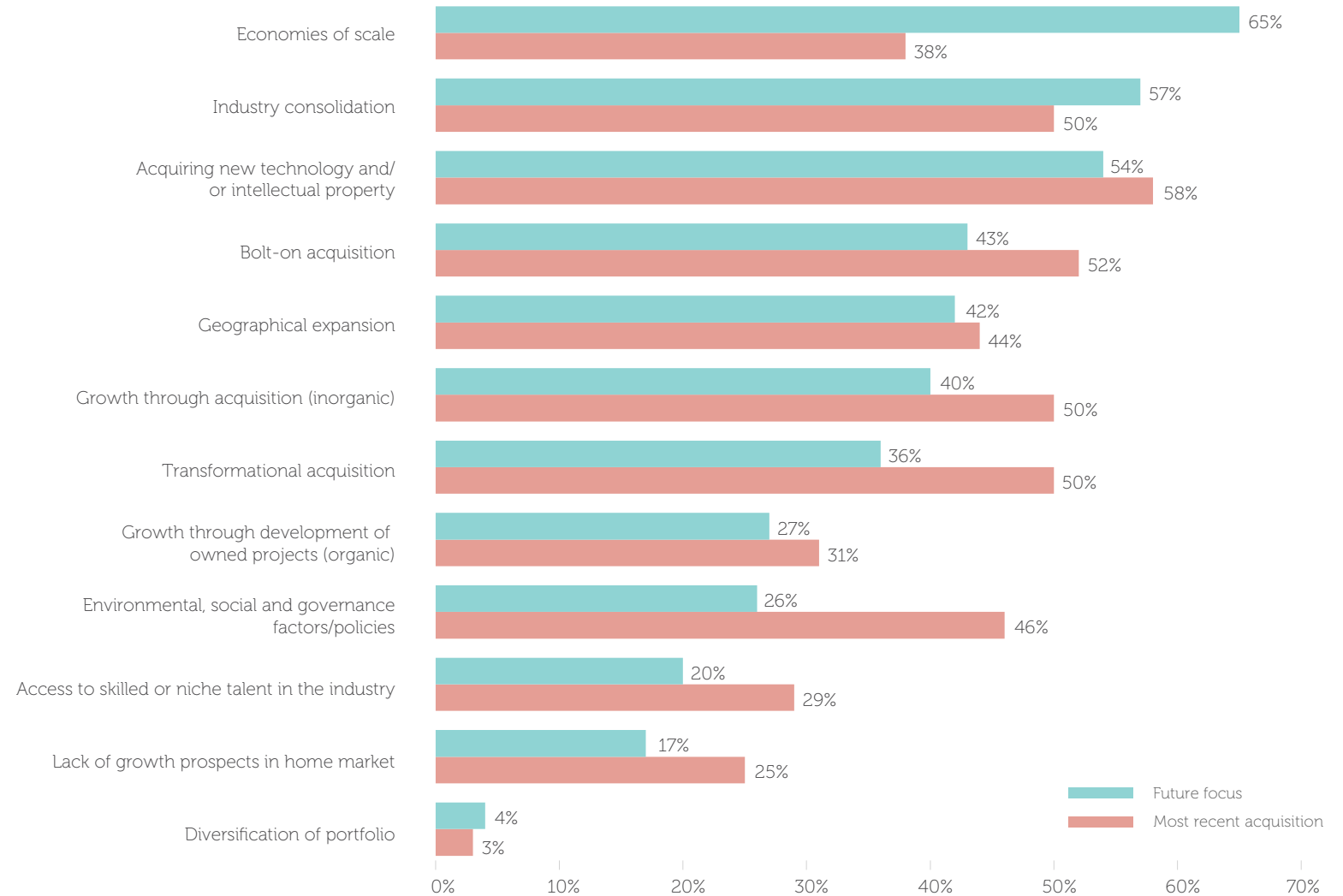
Respondents are looking to expand their operations and investments in Australia and many are taking new approaches to achieving these objectives.

Achieving economies of scale has risen up the agenda for most investors. Indeed, 65% of respondents now say this is a key priority in future planning, up from only 38% of respondents in the past (Figure 10). Many say this is being done defensively in anticipation of market turbulence and uncertainty. The Head of M&A at a UK-based energy company sheds light on this, saying that, “We will be investing for economies of scale in the next couple of years. As the threat of inflation has been increasing steadily, we have to find ways to reduce the overall cost of operations.”

In that vein, industry consolidation will also factor into strategies. More than half of respondents (57%) feel the market is ripe for mergers and acquisitions, with the VP of M&A at a Czech-based fund saying that, “Industry consolidation presents new opportunities for transforming our operations and accessing talent after integration. We can improve the operations and sustainability potential of current companies systematically.”

Figure 10.

Which of the following best describes the key objectives of your most recent renewable energy investment in Australia?
What do you anticipate the focus of future investments will be?



Investment strategies: The race for scale

More generally, mergers and acquisitions have been and will continue to be a key driver of future trends. Our study shows that more than half of respondents (52%) say that a bolt-on acquisition was among the main objectives of their most recent deal, along with 50% who point to inorganic growth through acquisition.

Most respondents (95%) also agree that increasing activity in secondary markets could drive M&A and other investments, particularly with private equity firms looking to make good on their decarbonisation pledges ([Appendix A](#)).

“There will be more secondary deals involving renewables assets,” predicts the Chief Operating Officer of an Australia-based fund. “Private equity companies are looking for diversification opportunities, and they want to invest in more sub-sectors by selling a good percentage of existing shares.”

“

“The M&A landscape for Australian renewables is strong, buoyed by the announcement of renewable energy targets, the scheduled shutdown of coal-fired generators and a supportive Federal government policy environment post-election. We’re seeing increasing levels of deal activity and a very competitive landscape on the buy side, often with multiple interested parties.

Andrea Frank – Partner – Mergers & Acquisitions

“

Prospective investors have been looking for asset scale in Australia for some time and sellers have started to respond with a pronounced shift towards platform deals offering a mix of operating and development assets. Sellers who are able to offer a mix of cash-generative operating assets together with a pipeline of near- and medium-term development assets together with project management and development expertise, will continue to attract outside buyer interest and achieve optimal pricing.

Sebastian Rosholt – Partner – Mergers & Acquisitions



Australian renewables M&A: 2022 year in review

Dealmaking in Australia’s renewable energy sector broke new ground in 2022 with both volume and value soaring to historic highs. Deal volume more than doubled to reach a total of 46 transactions, up from 22 the previous year. Deal value, meanwhile, climbed 14% to an all-time high of US\$17.4bn (Figure 11).

The dramatic expansion seen in 2022 is underpinned by a dealmaking ecosystem of increasing maturity. An example of this is the ability of developers to develop generation projects, package them up to investors or acquirers (specialist infrastructure funds are one example) at varying stages of development and then move on to pursue new development projects.

That said, appetite for revenue-generating renewable assets is broad. Acquirers of operational solar and wind farms in 2022 included not only funds, but also energy and utilities businesses, major oil & gas players, government organisations and family offices. In short, there is a healthy and broad spread of acquirers for a limited pool – albeit increasing – of operational renewable assets.

There are a number of notable trends from the past year that are likely to continue into 2023:

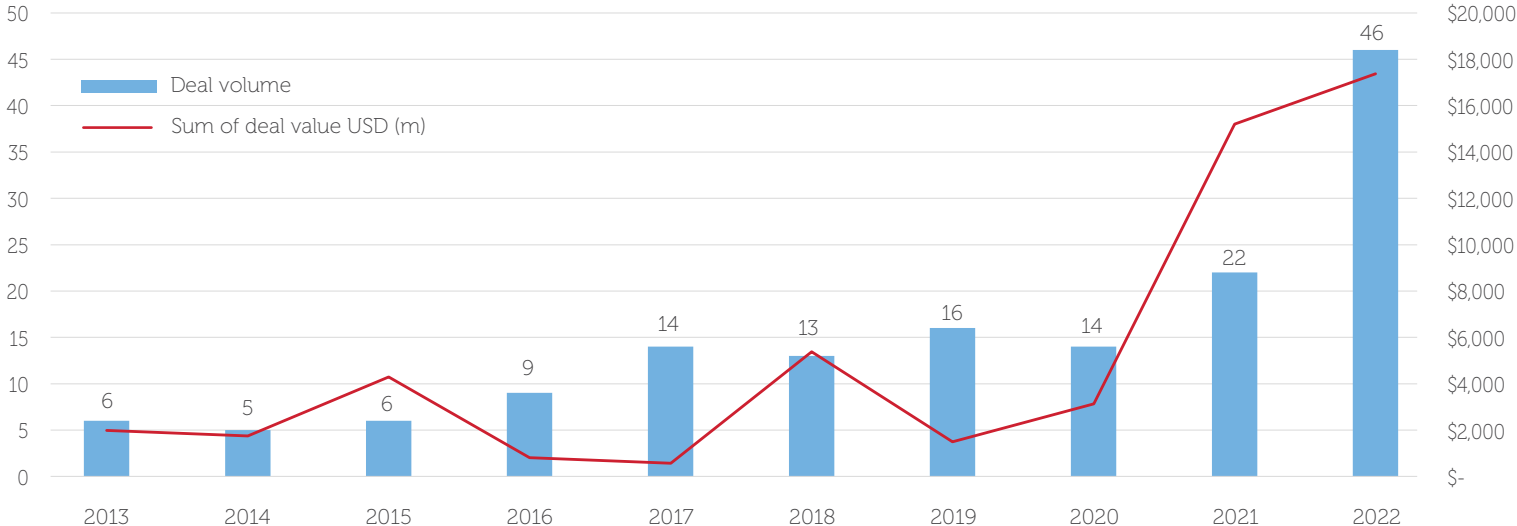
Early-stage investments

Acquirers are not restricting themselves to operational assets alone and a wider range of acquirers than ever are looking to get in on the ground floor by snapping up stakes – and sometimes entire projects – at an early stage of development.

Examples of development-stage investors include not only developers, but also energy and utilities businesses, infrastructure funds, oil & gas companies, government organisations and sovereign wealth funds.

Nearly half of the transactions involving early-stage assets in 2022 involved acquirers of this sort. Indeed, the biggest deal of 2022 – BP’s mammoth US\$12bn acquisition of a stake in the Asian Renewable Energy Hub – underlines this trend.

Figure 11.
Australian M&A: Renewable energy transactions



Looking beyond power generation

Solar and wind farms with grid connections were the mainstay of M&A transactions in 2022. However, the renewables marketplace in Australia is rapidly becoming richer and more diverse, with a wide pool of assets beyond power generation. To put this in perspective, nearly a third of all the transactions recorded in 2022 involved investments in supporting infrastructure, services and supply chain – another sign of the market’s increasing maturity. Examples include major investments in pure-play Battery Energy Storage Systems (BESSs), software and technology, transmission infrastructure, energy efficiency and innovative construction systems.

Hydrogen

Investment in hydrogen was another notable trend in 2022. Interest has been driven by the Russian invasion of Ukraine, and in particular by the impact this has had on global energy markets, as well as interest from Japan and Korea in the offtake market. Alternative fuels are an increasing area of focus for investors and one in every six deals transacted in 2022 in the Australian renewables M&A market involved assets linked to hydrogen production. Forward-looking sentiment, however,

paints a different picture, one of cautious optimism as investors contemplate the near-term impact and viability of hydrogen in the market. We explore these trends and sentiments on [page 25](#).

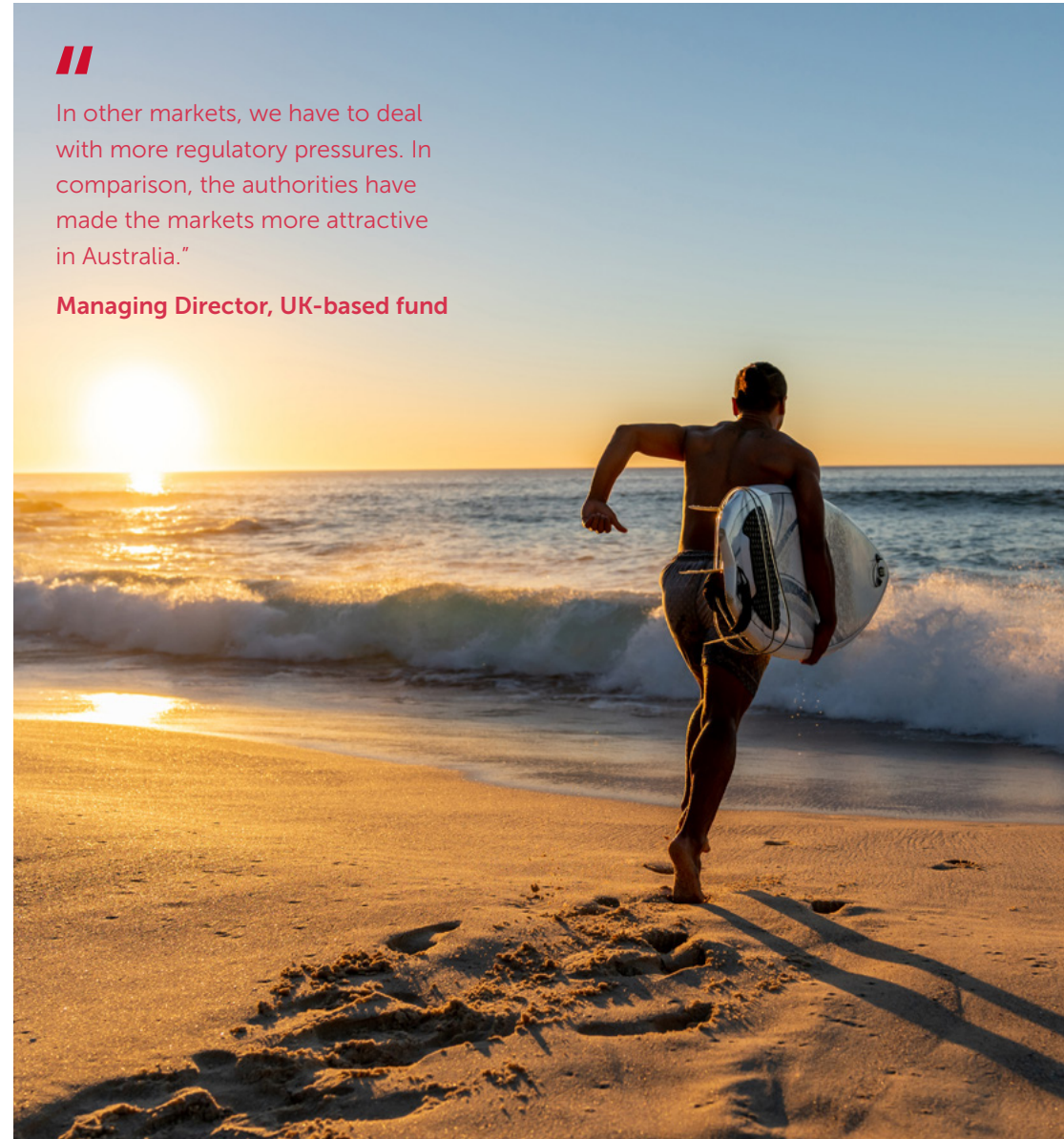
Transformational M&A

Another theme shaping the M&A market is the prevalence of oil & gas investors – more than 10% of renewables deals by volume in 2022 involved oil company backing, underlining the way that oil companies are racing to transform their businesses and boost their green credentials. “Oil and gas operators who want to decarbonise their activities would acquire renewables assets for vertical development. They would prefer to own renewable assets to maintain a strong reputation in markets,” says the Head of Renewable Energy at an Australia-based fund.



In other markets, we have to deal with more regulatory pressures. In comparison, the authorities have made the markets more attractive in Australia.”

Managing Director, UK-based fund



Policy and financing: Changing perceptions and new challenge

Policy, regulation and uncertainty around incentives are no longer viewed as the main barriers to investing in Australian renewables – but new challenges are arising for which investors must be prepared.

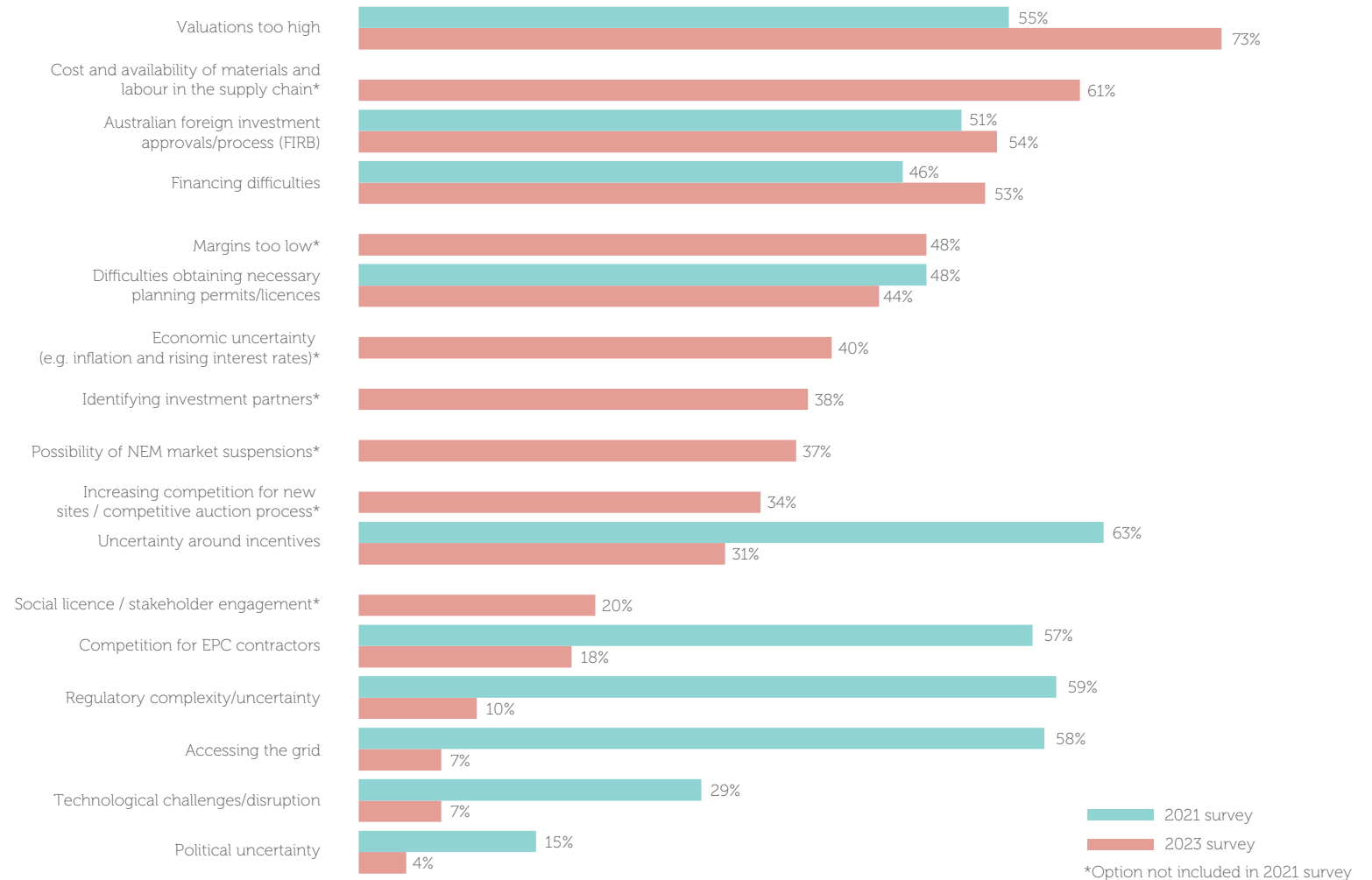
Sentiment has shifted sharply as renewables investors point to a new set of barriers that are challenging their investments. In our research this year, traditional pain points around incentives and regulatory complexity are no longer top concerns. Looking at this in more detail, the proportion of respondents who highlight uncertainty around incentives has dropped by more than half since 2021, falling from 63% to 31% (Figure 12).

The swing in investor perceptions is even more pronounced when it comes to regulatory complexity/uncertainty. Back in 2021, this was a top concern for 59% of respondents. In 2023, just 10% see it as a challenge.

Speaking to the changing temperature of these views, the Managing Director of a UK-based fund says, “In other markets, we have to deal with more regulatory pressures. In comparison, the authorities have made the markets more attractive in Australia.” Many other investors share in this sentiment.

Figure 12.

Which of the following will be the most significant barrier/challenge to investment in Australian renewables in the next 12 months?



Policy and financing: Changing perceptions and new challenge

Government policies: A promising horizon

Going forward, respondents expect government policies at both the state and federal levels to become much more supportive. Almost half (45%) say state policies will be very supportive 1-2 years from now, with 34% holding similar opinions towards backing at the federal level (Figure 13). Both show noticeable increases from current levels.

Specifically, almost all (93%) agree to some extent that federal and state support for new transmission lines will see increased grid capacity (Appendix A). Grid constraints have been a sticking point for years and policies to ease bottlenecks are welcomed by investors. "New transmission lines have become very important for development and growth in the renewables sector. The government will create new opportunities to increase grid capacity in a timely manner," says the Head of Renewable Energy at an Australia-based fund.

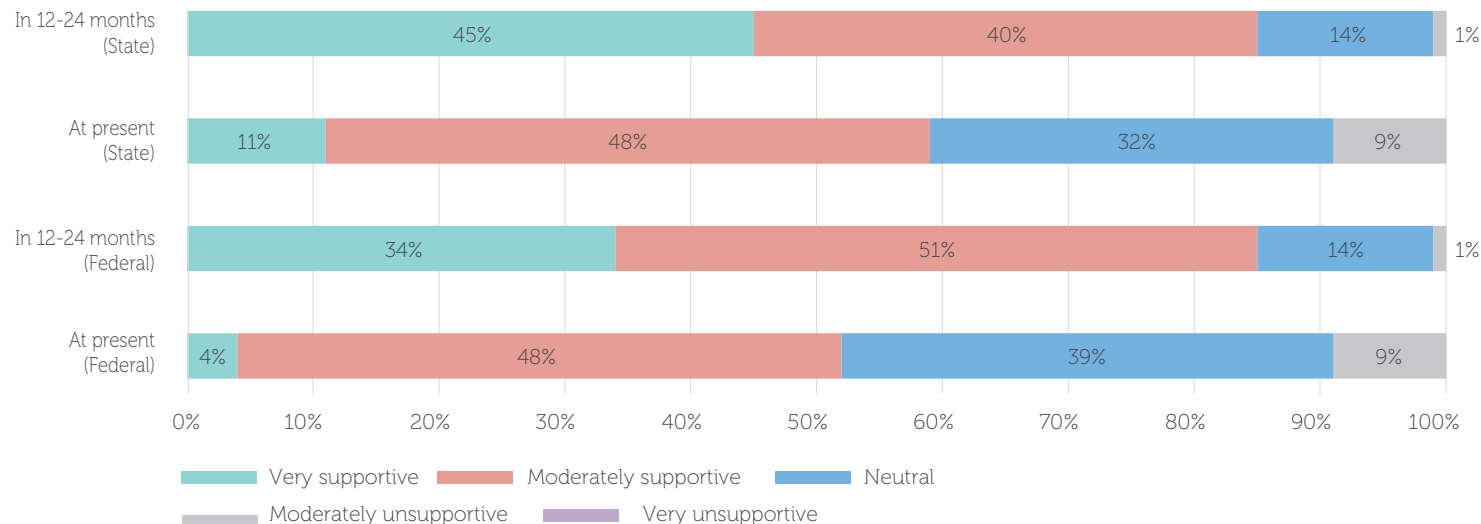
While policy-related concerns are generally easing, respondents are nonetheless concerned about inbound investment scrutiny, which became notably tighter during the pandemic. While this has eased somewhat, figure 12 shows that 54% see the Foreign Investment Review Board (FIRB) approvals process as the most significant barrier/challenge to investment over the next 12 months.



Renewable investors are overwhelmingly looking to NSW, followed by Victoria. These States have taken very different approaches to their support of Renewable Energy Zones, with NSW introducing a new regulatory regime, and Victoria seeking to work from within the national framework. Both are taking steps to address a regime that was simply not designed for the sheer size and speed of the energy transition."

Fiona Lewis – Partner – Energy regulation | Government policy

Figure 13. How supportive are Australian government policies (Federal and State) towards the renewable energy sector at present? How supportive will they be in 12-24 months' time?



New transmission lines have become very important for development and growth in the renewables sector. The government will create new opportunities to increase grid capacity in a timely manner.

Head of Renewable Energy, Australia-based fund

Policy and financing: Changing perceptions and new challenge

Top challenge 2023: Valuations

Valuations being too high has risen to replace regulation and incentives concerns as the top challenge facing renewables investors. As figure 12 shows, there was a notable jump in respondents who think valuations are too high, with 73% now citing this as a concern versus 55% from two years ago.

The collision of intense competition for assets and higher borrowing costs is not making valuations any easier. “One of the main challenges of acquiring targets in Australia is the valuation gap. Sellers anticipate a higher pay-out upon selling. However, buyers are more sceptical about the asset quality,” says the Head of Renewable Energy at a US-based fund.

Adding to this is the need to factor in the long-run implications of inflation – now at a near 40-year high in Australia, as elsewhere. “Acquisitions will become more challenging. Moreover, inflation and supply chain pressure will increase the cost of operations after the acquisition,” says the Managing Director of an Australia-based fund.

Challenges around valuations bring into clear view the benefits associated with having a strong domestic development team.

Financing: A partially cloudy outlook

Financing challenges may likewise create obstacles. More than half of respondents (53%) hold this view as noted in Figure 12 – and most respondents (91%) agree that new financing and refinancing for renewables projects will become more difficult in the year ahead ([Appendix A](#)).

“Traditional banking establishments have limited their financing choices and they are supporting high-growth sectors more. Support for capital-intensive industries has declined somewhat as they anticipate greater risks,” says the Managing Partner of a Canada-based fund.

In particular, availability/cost of leverage (cited by 28% of respondents) and underlying economic weakness (23%) – in addition to hikes in Australian interest rates (19%) – are seen as presenting the greatest challenge to financing renewable projects (Figure 14). The subject of interest rate hikes, specifically, prompts a significant response from investors. Comments suggest that many are mulling over three different strategies: (1) sit tight and wait for monetary policy to ease (and therefore delay deal decisions); (2) accept weaker margins; or (3) sell assets.



Hikes in Australian interest rates would mean delays in completing deal decisions. Dealmakers might opt for sale of non-core assets to reduce the percentage of financing required for deals.”

Head of Strategy at a Malaysian energy company

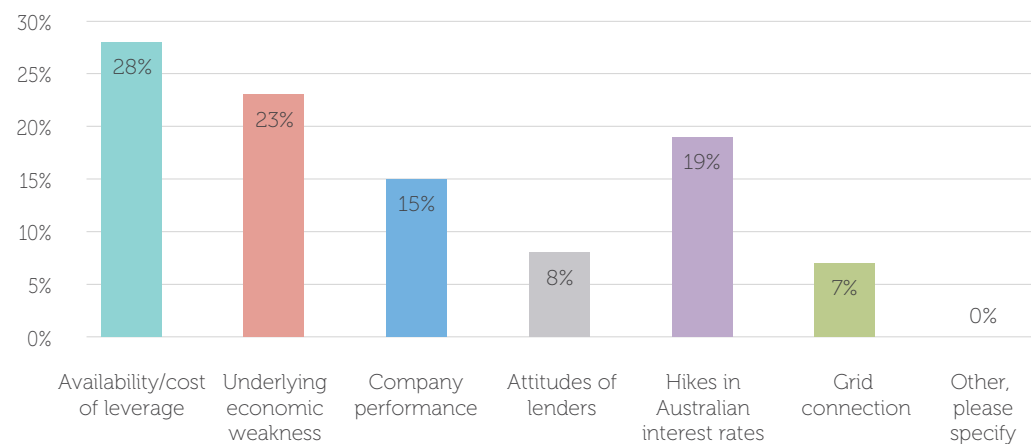


One of the main challenges of acquiring targets in Australia is the valuation gap. Sellers anticipate a higher pay-out upon selling. However, buyers are more sceptical about the asset quality.”

Head of Renewable Energy, US-based fund

Figure 14.

What do you view as the greatest challenge to financing renewables investments over the next 12 months?



Policy and financing: Changing perceptions and new challenge

Despite these challenges, the outlook for financing renewable energy projects in Australia remains promising. The increasing cost-competitiveness of renewable energy technologies, the growing demand for renewable energy, and the availability of government and private sector financing programs are all expected to continue to drive investment in the coming years.

As such, respondents rank Australia among the top markets likely to have a supportive financing environment for renewables projects in 12 months' time – ahead of other developed economies (Figure 15). Indeed, only India and Brazil rank higher.

Figure 15. Which of the following countries has the most supportive financing environment for renewables projects at present? Which will have the most supportive environment in 12 months' time?



Greater access: Easing the grid burden

While macroeconomic challenges remain, grid access is seen as becoming less and less of a problem. In figure 12, just 7% of respondents in our current study see grid access as being a barrier/challenge versus 58% in our 2021 survey – despite the fact that investment in power grids continues to lag some distance behind investment in renewable generation.

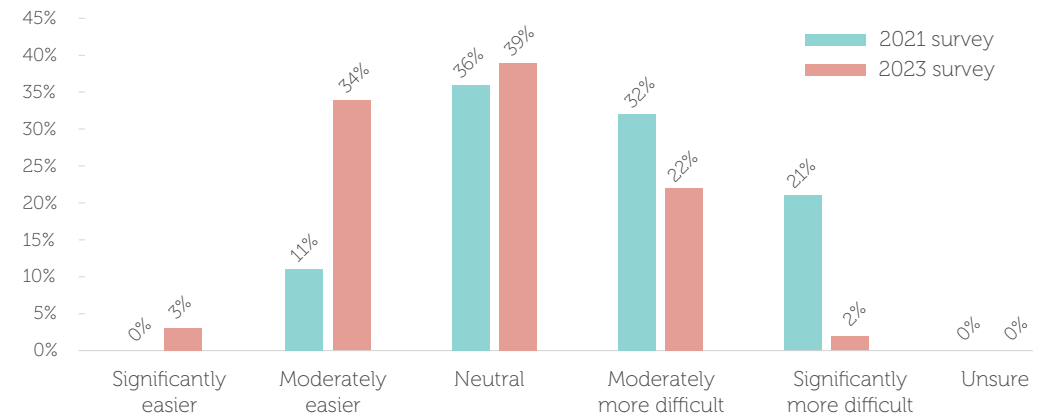
Looking at this in more detail, 37% of respondents say the grid is easier to access today compared to 12 months ago (Figure 16). By contrast, only 11% expressed similar views in our 2021 survey. “Access to grids is getting easier each year,” says the Managing Director of an Australia-based fund. “The focus on net zero targets is driving changes in grid access. At several locations, upgrades are either planned, or have begun successfully.”



Acquisitions will become more challenging. Moreover, inflation and supply chain pressure will increase the cost of operations after the acquisition.”

Managing Director, Australia-based fund

Figure 16. Is accessing the grid getting easier or more difficult compared to 12 months ago?



Policy and financing: Changing perceptions and new challenge

Social licence

The need to obtain community acceptance for large-scale renewable energy projects is a common factor in all geographies. In Australia, obtaining social licence is often an important part of this process. Social licence is earned rather than granted, and this is achieved by building community acceptance through dialogue.

Although winning hearts and minds is not always easy, few respondents – just 20% – see social licence/stakeholder engagement as the most significant barrier/challenge to investment, at least so far. In fact, the opposite is true for a majority of respondents: more than half (63%) agree that social licence and ESG considerations in addressing stakeholder concerns is a driver for new renewable projects [\(Appendix A\)](#).

At the same time, however, most respondents (71%) think it is getting more difficult to secure planning approvals and navigate social licence issues for new developments [\(Appendix A\)](#). While none of our respondents reported encountering difficulties with solar and wind developments, several highlighted specific risks around geothermal projects. “Investing in geothermal energy without knowing the environmental risks completely might result in heavy losses. If these projects are shut down due to environmental issues, it would also cause reputational damage,” says the Chief Financial Officer of a Singapore-based energy company.



“

We are seeing social licence for renewable energy projects and associated infrastructure becoming a key barrier to the successful delivery of Australia’s decarbonisation ambitions. Trust, transparency and integrity remain the key currency in regional Australia and projects need to be developed with these principles guiding stakeholder interactions.”

Joshua Dellios – Partner – Environment & Planning

Regulatory reform



Reform of the NEM regulatory framework is important. There are uncertainties about the NEM capacity, and there should be some effective guidelines and regulations in place to support development.”

Managing Director, US-based bank



Regulatory change remains an ongoing feature of the renewables sector. The Australian Energy Market Commission continues to have a high workload, notwithstanding that the State governments are increasingly going on their own paths. The recent disbandment of the Australian Energy Security Board probably signals that State and Federal governments are wanting to take back greater control of regulatory policy, rather than delegate responsibility to independent rule-making bodies”.

Joel Reid — PPAs | Network connection | Project development

Emissions reductions and renewable energy target legislation are seen as the most important regulatory reforms to assist in the development of renewable projects in Australia (Figure 17). “Emission reduction legislation will assist development,” says the Managing Director of an Australia-based bank. “Regulatory authorities will take a stricter approach when reviewing the emissions by companies recorded in various sectors. They will drive acceptance of renewable energy.”

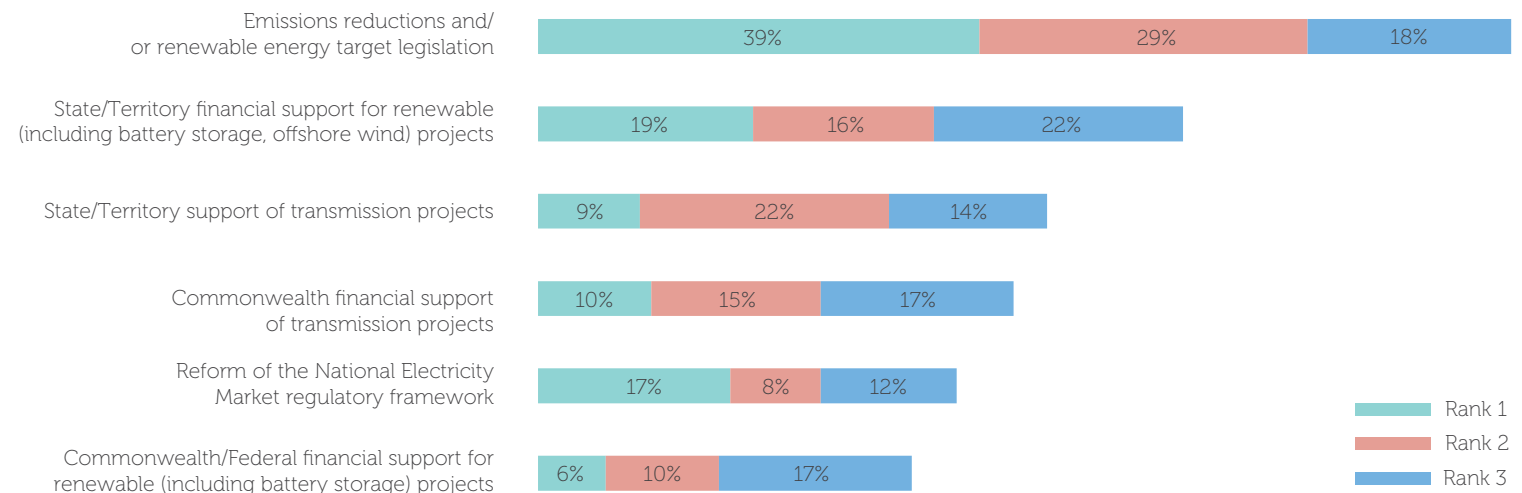
Government financial support is also a hot topic. While some are looking to the federal government to provide support, a larger proportion see state/territory governments as being the most important source.

That said, a number of respondents think a steer from federal government could make all the difference. “To assist development of renewables projects, commonwealth financial support would be critical. Projects can be designed and funded more systematically. This would increase the speed at which projects are completed,” says the Managing Director of a Japan-based fund.

Reform of the National Electricity Market (NEM) regulatory framework is also highlighted – particularly in the wake of last year’s temporary suspension of Australia’s main wholesale electricity market, the first in its history. “Reform of the NEM regulatory framework is important,” says the Managing Director of a US-based bank. “There are uncertainties about the NEM capacity, and there should be some effective guidelines and regulations in place to support development.”

Figure 17.

What is the most important regulatory reform or government programs to assist the development of renewable projects in Australia?



Renewable Energy Zones: Unlocking grid capacity for new generation

Renewable Energy Zones (REZs) are designated geographical areas in which clusters of large-scale renewable energy projects can be developed to take advantage of economies of scale and strike the best balance between generation, transmission and demand.

The AEMO (Australian Energy Market Operator) has identified more than 40 REZ sites – all of them in the east of the country – in the states of New South Wales, Queensland, South Australia, Tasmania and Victoria. Offshore REZs have also been identified.

REZ rollouts are seen by respondents as one of the top network developments needed to facilitate further renewables projects – along with the development of transmission infrastructure within regions (Figure 18). “Development of Renewable Energy Zones is critical,” says the Head of M&A at a Spain-based energy firm. “Companies concentrated in these zones can seek more synergetic partnerships and develop stronger infrastructure for renewable energy distribution.”

Respondents pinpoint several key considerations that will be important in the development of REZs. These include integration/interaction with balance of transmission network (mentioned by 62%), regulatory simplicity (61%), and greater certainty around marginal loss factors – a measure of how much electricity is lost in transmission (cited by 59%).

Easier connection to the grid (mentioned by 58%) is also a top consideration (Figure 19). “Creating a high-voltage infrastructure is essential,” says the Chief Financial Officer of a UK-based energy company. “Firm access to the network through REZ can improve distribution and it will maximise the use of the REZ infrastructure in the coming years.”



Development of Renewable Energy Zones is critical. Companies concentrated in these zones can seek more synergetic partnerships and develop stronger infrastructure for renewable energy distribution.

Head of M&A, Spain-based energy firm

Figure 18.

To facilitate further renewable investment projects, how critical are each of the following network developments to the Australian market:

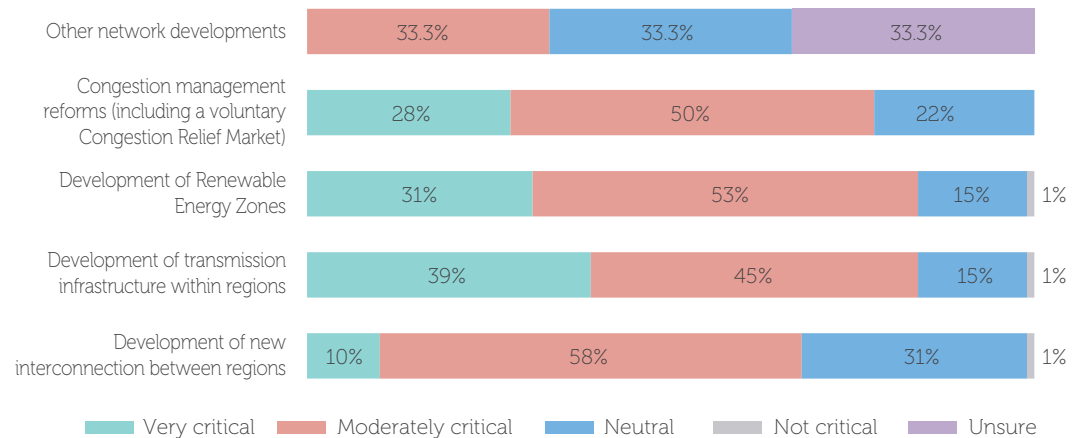
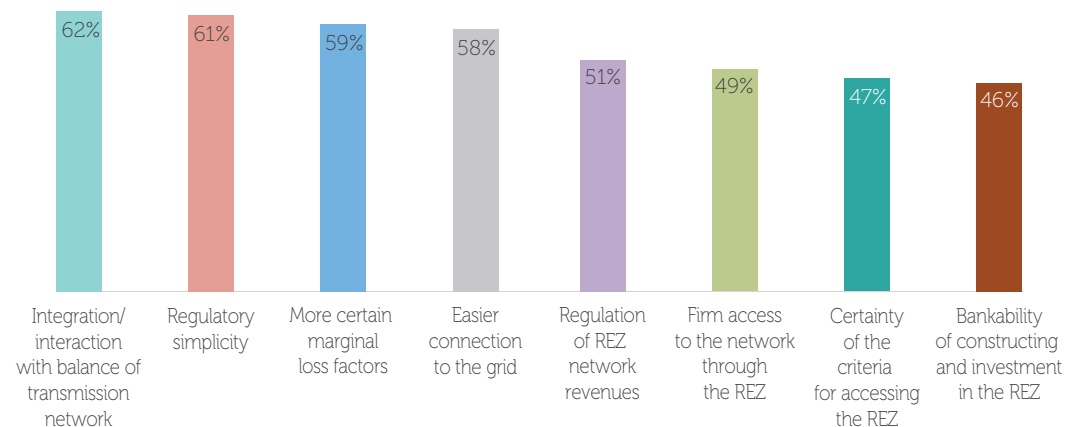


Figure 19.

What considerations will be important in the development of Renewable Energy Zones?



Sectors in the spotlight

PV solar remains firmly the first preference for investors, although many other sub-sectors present green and growing opportunities.

Views about the investment prospects and problem areas in different sub-sectors are shifting. Regardless, Australian renewables continue to cater to a wide range of investor preferences and risk appetites.

PV solar

Almost all (97%) respondents point to PV solar as offering the greatest opportunities, in line with sentiment from our 2021 study (Figure 20). Solar energy represents a thriving sub-sector, leveraging Australia's abundant sunlight and decreasing solar panel costs. Investors can explore opportunities in large-scale solar farms, residential solar installations, and commercial solar projects.

Batteries

The integration of renewable energy sources, such as solar and wind, with advanced energy storage technologies presents a compelling proposition. As Australia continues to advance its renewable energy goals, investments in these hybrid battery systems offer the

potential for long-term profitability, as well as environmental and societal benefits. "The opportunities in hybrid battery, solar and wind are better compared to other sub-sectors. There is more certainty about the output," says the Managing Director of a US-based bank.

Biomass/biogas/waste-2-energy

As Australia aims to diversify its energy mix and reduce reliance on fossil fuels, biomass, biogas, and waste-to-energy projects will play a vital role in this transition. As such, 83% of respondents see this space as having the most opportunities, a noticeable jump from only 59% in 2021. Moreover, it is seen as being a safer bet than it was in the past: only 7% of respondents now consider this sub-sector to be the riskiest compared to 24% in our 2021 study (Figure 21).

Offshore wind

Sentiment towards offshore wind has cooled somewhat since 2021, although it remains among the top sectors. Most respondents (85%) agree that legislative developments and incentive schemes regarding offshore wind will lead to significant investment in the next year or two ([Appendix A](#)).

Figure 20.

Which sub-sectors of renewable energy have the most opportunities?

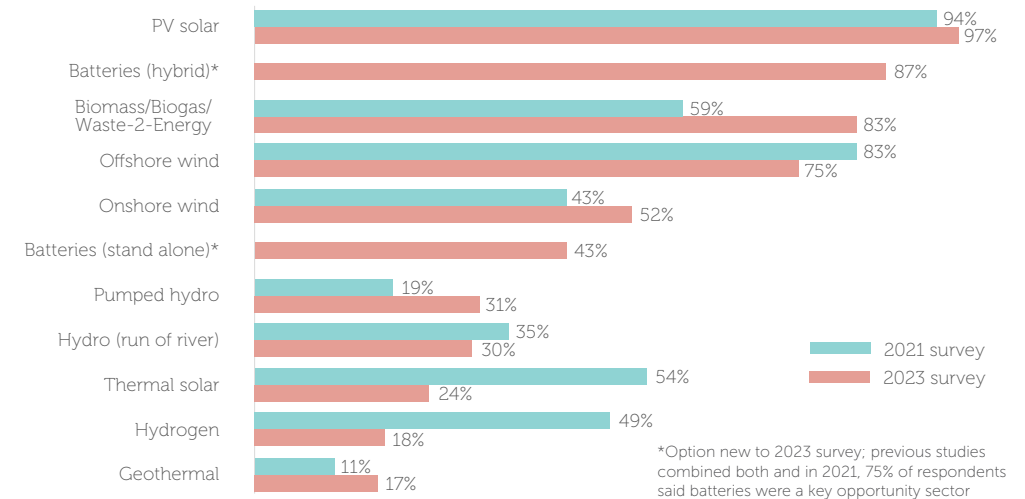
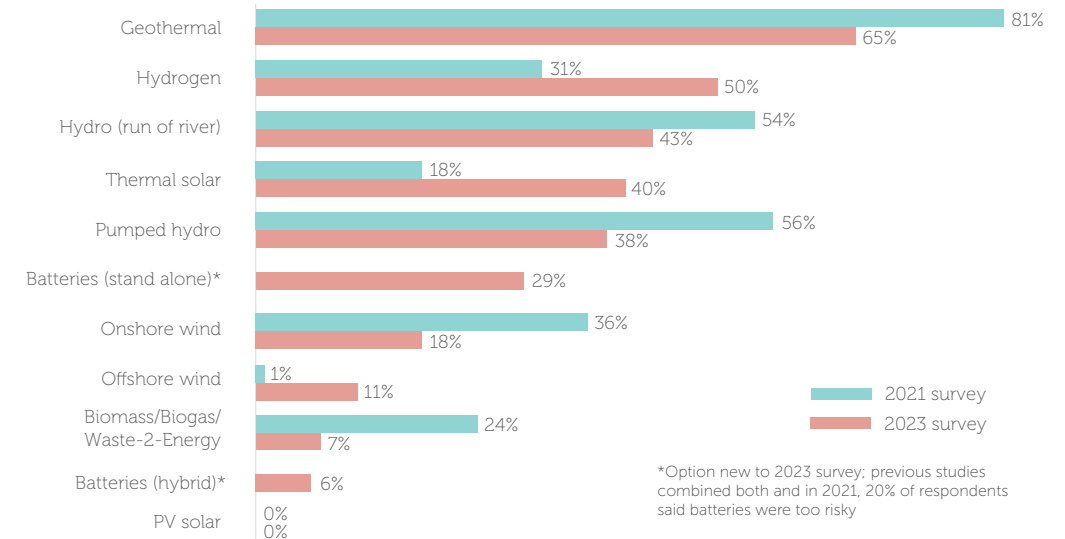


Figure 21.

Which sub-sectors of renewable energy have the most risks in Australia?



Sectors in the spotlight

Hydrogen: Falling from favour?

Sentiment towards hydrogen has shifted sharply. Only 18% see the opportunity today, compared to 49% in our 2021 study. In addition, a greater proportion now regards hydrogen as being the riskiest sector (50%).

“The higher cost of green hydrogen increases the risks of investing. Although we may see favourable results in the long-term, it is risky at present,” says the Managing Director of a Singapore-based bank.

Cost aside, investors are looking for more clarity around use cases for hydrogen. “Most industries are looking for seamless applications and this will take an additional amount of time to perfect,” says the Head of Renewable Energy at an Australia-based fund. “There are various applications that have not reached the maturity stage planned.”

Despite this, most see hydrogen technology and implementation catching up with expectations in the near term. To put this in context, 40% expect hydrogen to catch

up with expectations and/or reach maturity within one to two years, while 44% expect it to catch up with expectations and/or reach maturity in two to five years (Figure 22).

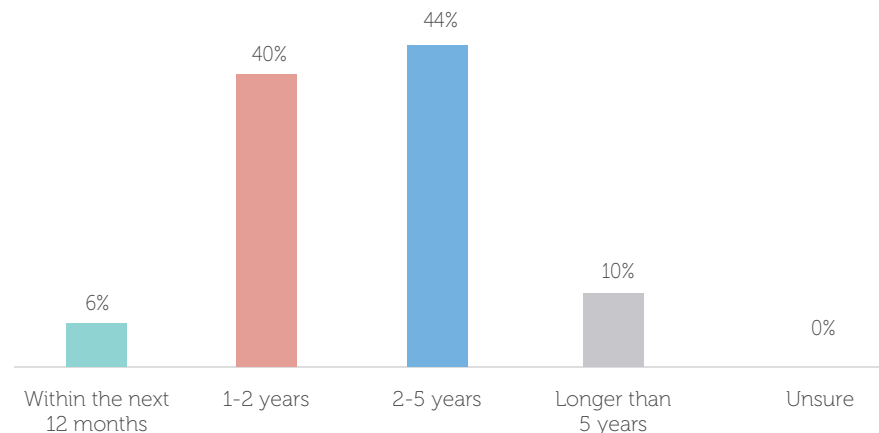
Against this background, most respondents (81%) say that investment in green hydrogen will have a positive impact overall on demand for renewables ([Appendix A](#)). Green hydrogen is produced using renewable electricity to electrolyse water (currently, the most common form of hydrogen is “grey” hydrogen, which is made using methane).

The prospects for hydrogen look increasingly promising. At a geopolitical level, disruption in global energy markets has ramped up interest in alternative fuels. Japan – which has few energy resources of its own – recently announced that it is looking to accelerate the rollout of hydrogen supply chains with international partners, including Australia.

Meanwhile, the Australian federal government has signalled a firm commitment to hydrogen with its recently announced Hydrogen Headstart program – a AU\$2.0bn package that will provide revenue support for large-scale renewable hydrogen projects through competitive hydrogen production contracts.

Figure 22.

How long before hydrogen technology and implementation catches up with expectations and/or reaches a point of industry maturity?



“

Japanese investors have been early movers in Australia’s hydrogen sector. As at March 2023, approximately 50% of Australia’s more than 100 hydrogen projects have Japanese involvement. This trend has been and will continue to be driven by Japan’s desire for stable, long-term energy supply together with achieving carbon net zero by 2050.

Geread Dooley – Partner – Mergers & Acquisitions | Japan Practice Leader

Sectors in the spotlight

The road ahead: Moving towards a post-fossil fuels future

Despite making enormous strides over the past decade, Australia continues to rely heavily on coal-fired power plants for its baseload electricity generation. Approximately 50% of electricity generated in Australia today still comes from coal.

However, most respondents (93%) agree that the Australian government is acting quickly to respond to the retirement of the existing fleet of coal-fired power generators ([Appendix A](#)). This is a significant increase

from our 2021 survey, in which only 47% said the same thing.

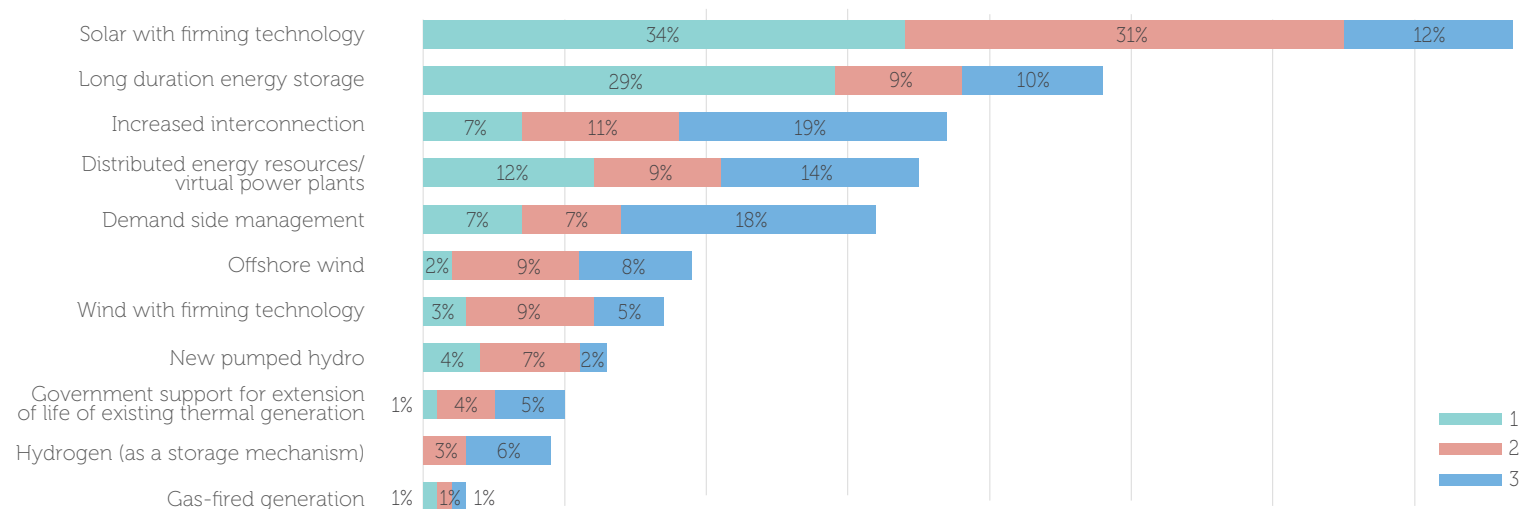
As existing thermal generation is retired, the challenge – and the need – will be to find ways to provide reliable baseload power using renewables instead of coal-fired power plants. This is no easy task because (with the exception of hydropower) renewable energy sources are inherently intermittent and the regulatory bar is high: Australia’s reliability standard requires that at least 99.998% of forecast customer demand is met each year.

Solar with firming technology is seen as the solution most likely to satisfy the system reliability requirement within the next ten years and is cited by more than a third of respondents (34%) as their top choice (Figure 23). “Firming technology will be useful to deal with the fluctuations of solar energy availability,” says the Vice President of an India-based energy company. “There will be more stable supplies. Considering the reliability of thermal generation, we need renewable options that are equally strong.”

Long-duration energy storage (LDES), and increased interconnection, are also seen as holding significant potential to meet system reliability requirements. In particular, LDES is seen as the most promising candidate by 29% of respondents and solutions include conventional pumped hydro as well as hydrogen.

However, the list of potential LDES technologies is lengthy and it includes a range of thermal, mechanical, chemical and electrochemical solutions, many of which have yet to be commercialised. Notably, LDES does not typically include lithium-ion Battery Energy Storage Systems of the sort currently used in grid-scale applications. These currently have only limited long-term storage capabilities.

Figure 23. Within the next 10 years, as existing thermal generation reaches the end of its life, what will most likely meet system reliability requirements in Australia?



Firming technology will be useful to deal with the fluctuations of solar energy availability. There will be more stable supplies. Considering the reliability of thermal generation, we need renewable options that are equally strong.”

Vice President, India-based energy company

Offshore investors

International investors continue to be drawn to Australia's vast potential for wind and solar projects and other renewable ventures.

Offshore investors completed US\$7.2bn in renewables infrastructure transactions in 2022. While this was a decrease from the year prior (US\$8.3bn) it was a noticeable improvement from the two-year slump from 2019 (US\$3.7bn) through 2020 (US\$3.4bn). Inbound volumes have likewise improved – and most respondents expect these trends to continue upward through the next 24 months.

Asia Pacific: Leading the charge

Most respondents think investors from the Asia-Pacific region will lead inbound investment: 58% expect a moderate increase while one-third predict a significant increase (Figure 24). "There will be significantly more investments from Asia Pacific," says the Managing Director of an Australia-based fund. "The level of renewables projects in Asia Pacific is low and since there are good opportunities in Australian markets, they prefer the region for investments."

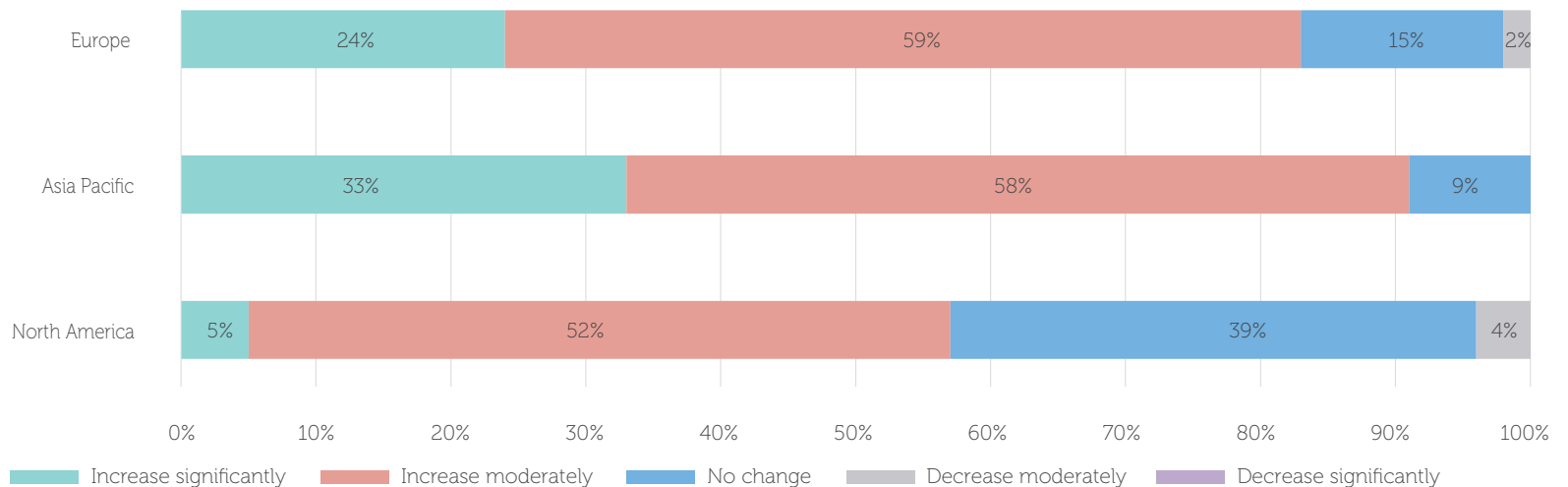
Japanese investors are tapped to play a leading role in this investment, according to 37% – the largest share for any APAC country and the second-largest globally after the US (Figure 25). "Japan is showing more interest in this regard. They would like to accelerate their renewables programs by collaborating with Australian companies," says the Head of Strategy at a Malaysia-based energy company.

China – cited by 20% of respondents – is also expected to be a key player. The Chief Financial Officer of an Australia-based energy company says: "China has reduced the number of investments in North

American markets and they are looking to redirect funds to Australian markets. The greater economic stability and greater potential of the renewables sector make the region more appealing."

Looking at investment trends, Asia-Pacific-based investors have finally topped their global competitors in deal volumes in 2022 (Figure 26). Deal values from these investors have rebounded precipitously since bottoming in 2019, reaching US\$3bn and going neck-and-neck with European investments for the year (Figure 27).

Figure 24. What do you expect will happen to the level of investment into the Australian renewable sector from the following international investor groups in the next 12-24 months?



Offshore investors

Europe: Inbound uptick

European buys of renewable assets in Australia have continued to increase, reaching US\$3.2bn in 2022 for the most inbound value by geographic region. European investors are expected to continue this trend, 83% of respondents forecasting that investment will increase – including nearly a quarter (24%) who say that investment will rise significantly. “European investors will be more active in other markets overall. Geopolitical considerations in Europe are increasing, and

we cannot predict changes in sanctions and policies over the next few months,” says the Head of Infrastructure Investments at an Australia-based fund.

The UK (mentioned by 27% of respondents) and Germany (24%) are expected to take the lead among European nations. The Managing Director of an Australia-based bank says: “German companies have more investment interests in Australia. Germany is moving fast towards the achievement of their net zero targets. Companies from the region are investing in Australia because

Australia has a strong renewable energy sector.”

North America: Slow and steady

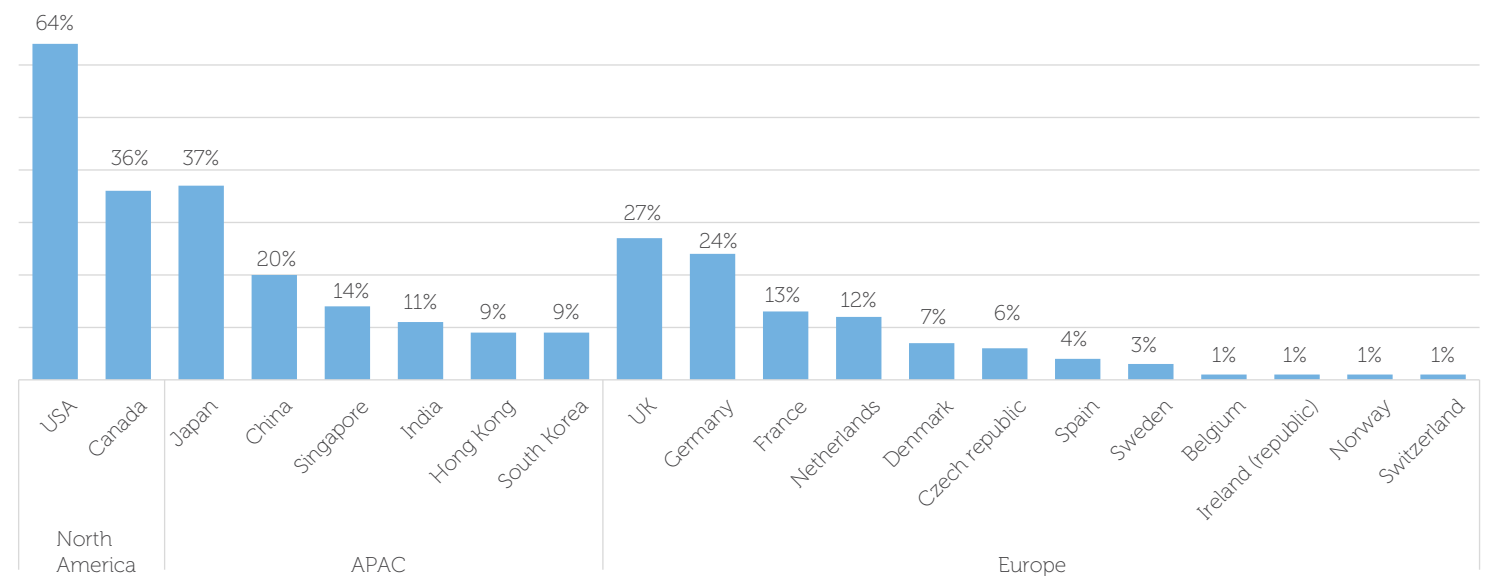
North America is expected to increase its investment less than Asia Pacific and Europe: 57% expect the overall level of investment from this direction to rise, although only 5% of respondents think the increase will be significant.

The US (cited by 64% of respondents) is expected to be the most active investor.

“Significant investments can be expected from the USA,” says the CEO of a US-based energy company. “The emphasis on ESG and net zero strategies is increasing. Companies in the US would bid a higher amount for Australian renewables targets.”

US inbound investments have inched up slightly from 2020 levels in volume terms, as indicated in figure 26. Values tell a very different story. From near-record lows in 2020 (US\$372m), investment figures reached historic highs in 2021 (US\$2.9bn) before dropping to US\$940m in 2022.

Figure 25. Specifically, which countries will be most active?



Offshore investors

Figure 26.
Inbound renewables investment by bidder geography (volume)

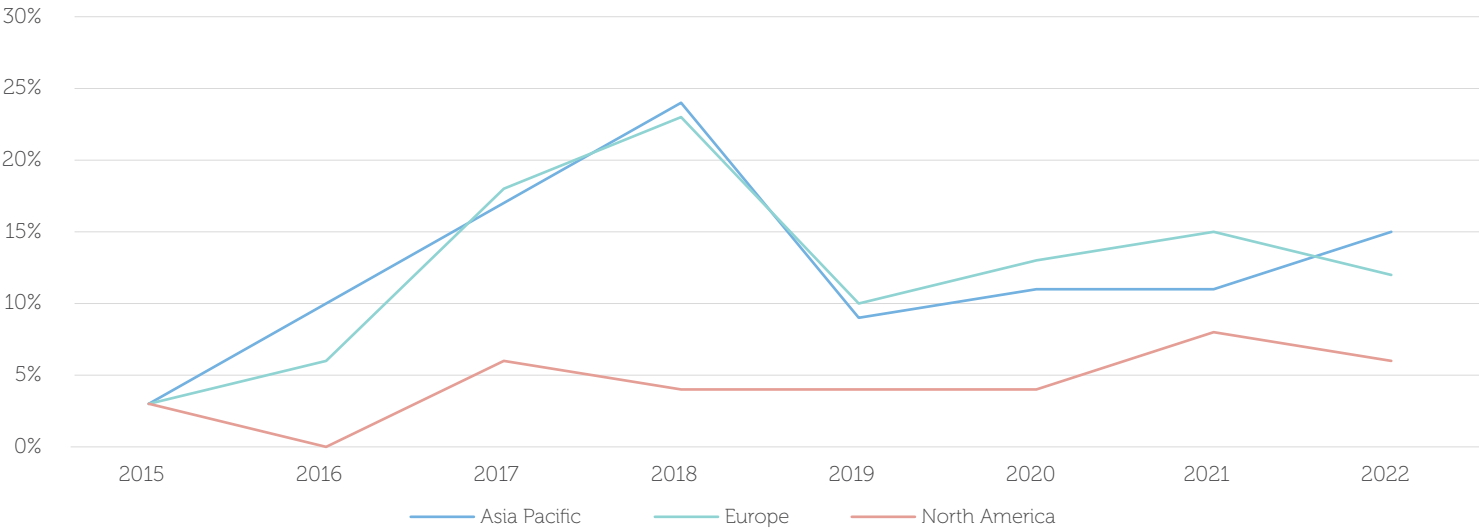
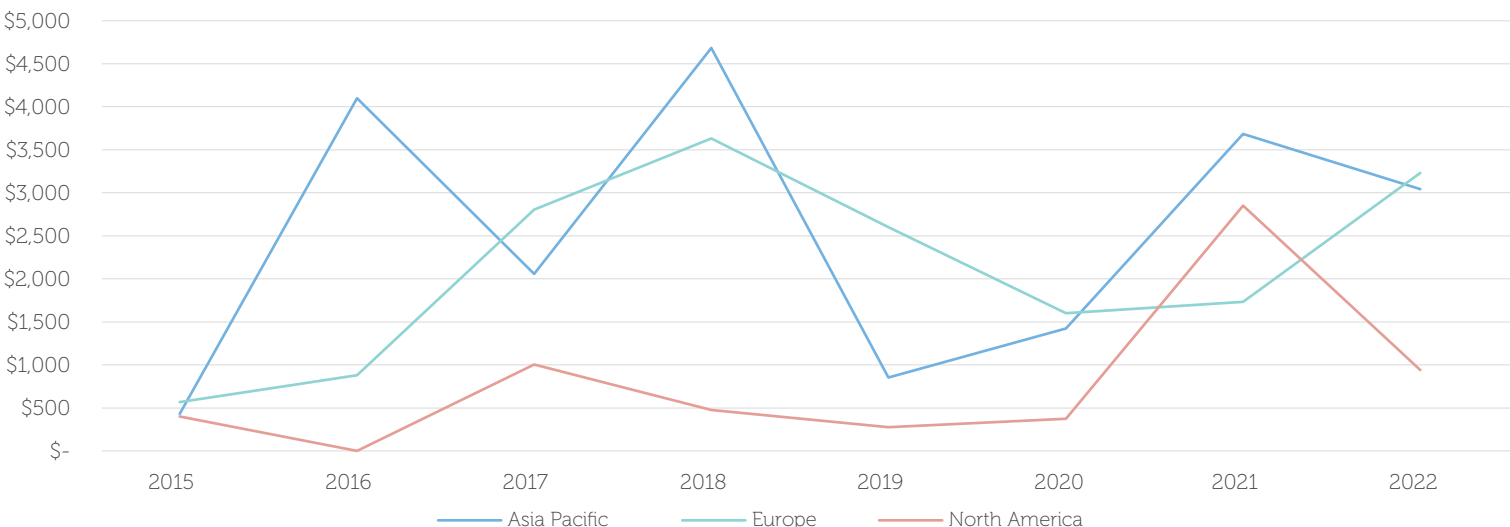


Figure 27.
Inbound renewables investment by bidder geography (value US\$m)



Offshore investors

Corporate, financial and state sponsors

Renewables developers are expected to be the most active investor group in 2023 (Figure 28). “There are industry consolidation opportunities, and renewables developers wouldn’t want to miss out on geographic expansion plans,” says the Chief Financial Officer of a Germany-based fund.

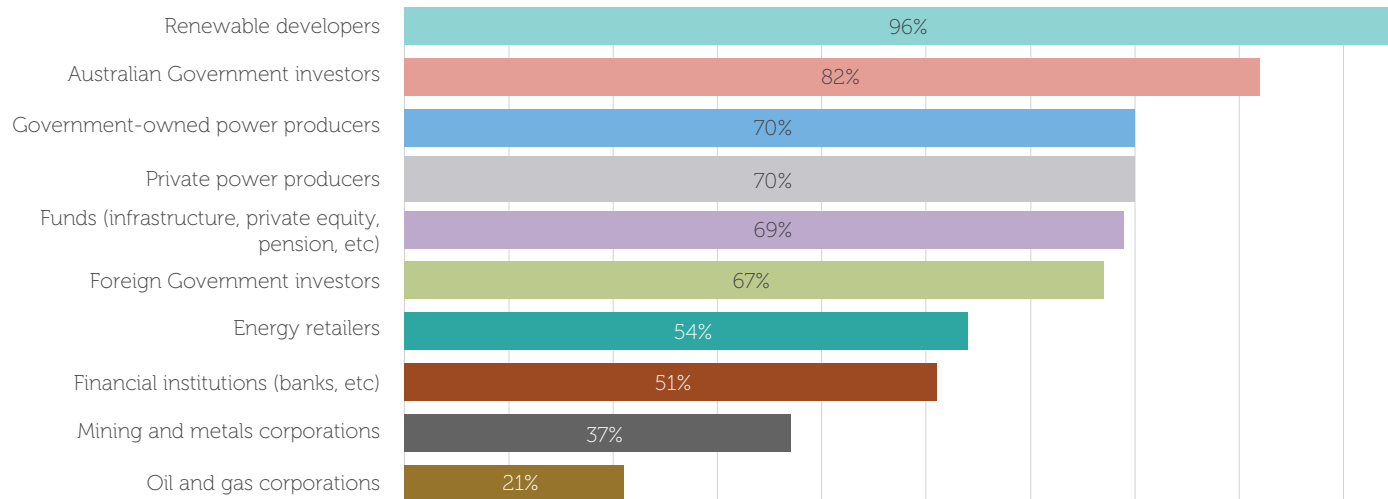
State sponsors are also expected to play a big role in the market: Australian government investors are forecast to

be among the most active by 82% of respondents, followed by government-owned power producers (cited by 70%). Foreign governments, too, are expected to be active investors (67%).

Private power producers (70%) and funds (69%) are also expected to participate. “Funds – including infrastructure and pension funds – have much to gain from renewable investments. Fund clients want to invest in more sustainable development projects, and the Australian renewables market is an apt choice,” says the Head

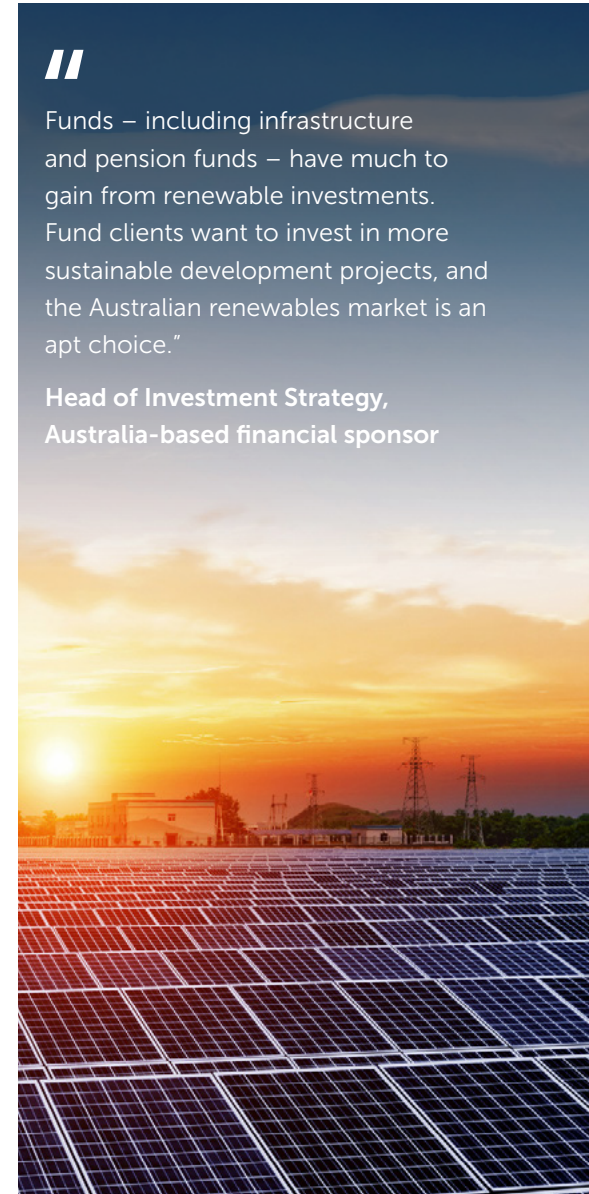
of Investment Strategy at an Australia-based financial sponsor. Sustainability is a particular attraction for buyout firms: “Private equity funds are more interested in identifying ESG-ready opportunities. Investing in the renewables sector would make their profile more attractive and enhance their reputation,” says the Chief Operating Officer of another Australia-based fund.

Figure 28. Which of the following do you expect to be most active in the Australian renewables market in the year ahead?



Funds – including infrastructure and pension funds – have much to gain from renewable investments. Fund clients want to invest in more sustainable development projects, and the Australian renewables market is an apt choice.”

**Head of Investment Strategy,
Australia-based financial sponsor**



Conclusion

The direction of travel for Australia's renewable energy market is overwhelmingly positive and as this study shows, investor sentiment is now stronger than ever. The reasons for this optimism are clear.

Investing in Australian renewables gets results

Nearly two-thirds of respondents say that their most recent investments were successful, with around one in five investors saying that they were very successful. Not surprisingly, the appetite for Australian renewable energy assets is on the rise with three-quarters of investors polled saying that they will increase their investments in Australia through 2023.

The regulatory landscape has become markedly more investor-friendly

This has been particularly true over the past year – and further improvements are expected. Most respondents think that government policies at both the state and federal levels will become much more supportive over the next one to two years. Meanwhile, pain points around incentives, regulatory complexity and accessing the grid have fallen substantially.

Australia's renewables economy is maturing – and rapidly

This is perhaps one of the most important developments, with evidence provided by the increasing diversity of targets being transacted. Utility-scale electricity generation aside, opportunities abound in areas such as supporting infrastructure, services, supply chain assets and technology. Meanwhile, the trend towards industry consolidation provides further evidence of the market's increasing maturity.

Investment challenges remain, not least those posed by inflation and high interest rates. But – as our study shows – investors are facing up to the headwinds with aplomb. And they are ready to seize the opportunities that lie ahead.



Appendix A

Incentive schemes will significantly increase the electrification of transport and industry in support of the renewables sector in the next 12-24 months

Investment in green hydrogen will have a positive impact on demand for renewables

Investors are showing preference to buy all or part of a development company/project rather than purchasing a pipeline of projects

Recent market suspension (in 2022) in the NEM has had a negative impact on investment sentiment

It is becoming easier to secure planning approvals and navigate social licence issues for new developments

Social licence and ESG considerations in addressing stakeholder concerns is a driver for new renewable projects

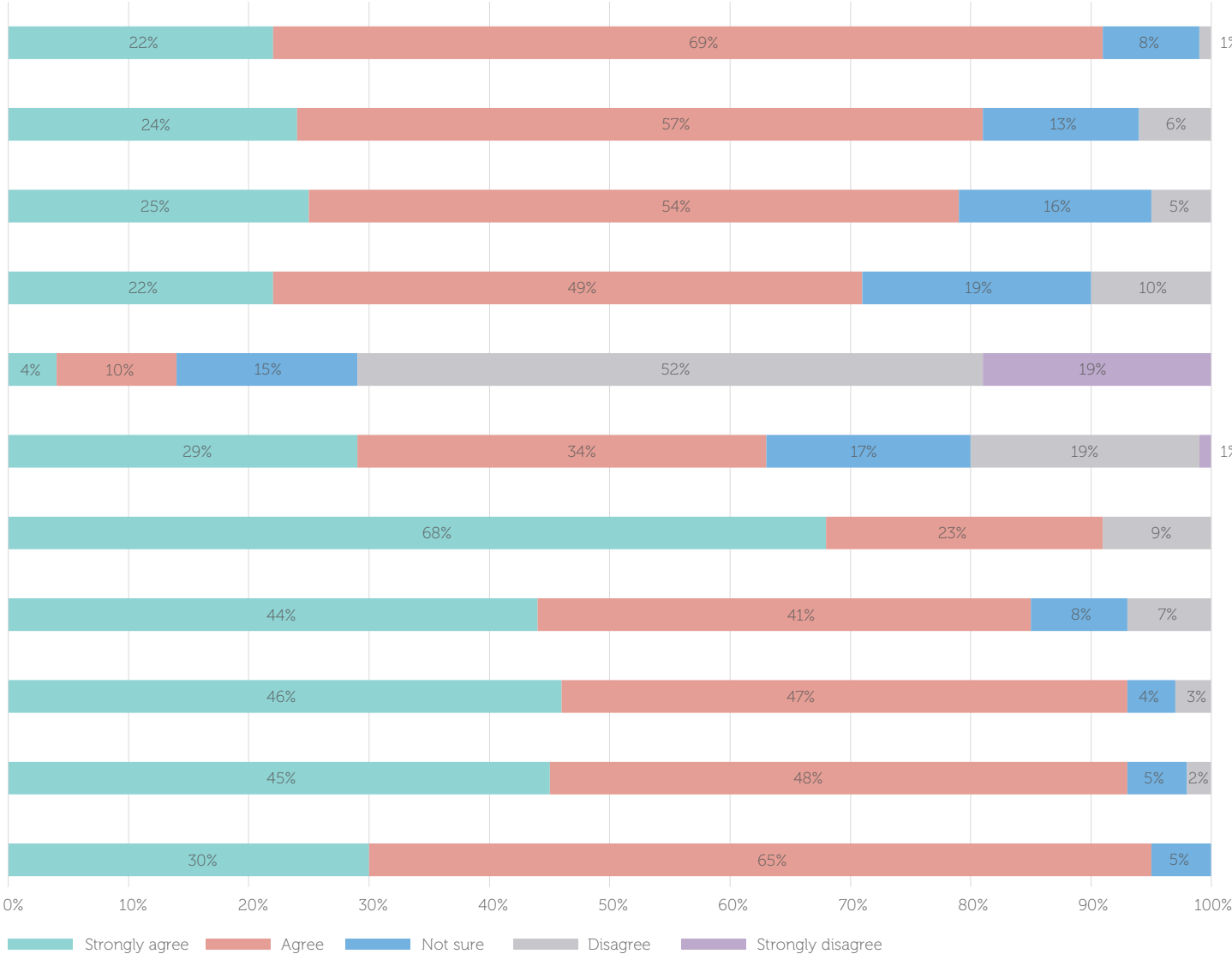
New financing and refinancing for renewables projects will become increasingly difficult in the year ahead.

Legislative developments and incentive schemes regarding offshore wind will lead to significant investment in offshore wind in Australia in the next 12-24 months

Federal and state support for new transmission lines will see increased grid capacity

Governments are acting quickly to respond to the retirement of Australia's existing fleet of coal-fired power generators

There will be an increase in secondary deals involving renewable energy assets in Australia in the next 12 months



Methodology

In Q1 2023, MinterEllison and Mergermarket canvassed the opinions of 100 renewable energy investors to gauge their views on the investment opportunities, trends and challenges in Australia. 60% were based outside Australia while 40% were domestic Australian firms. All respondents had in the past 12-24 months developed/funded/invested in at least one Australia-based renewable energy project.

Within the graphed survey results, percentages may not sum to 100% due to rounding, or when respondents were allowed to choose more than one answer.

All quoted data is proprietary of Mergermarket and Inframation Group unless otherwise stated.



How we can help

MinterEllison provides legal and consulting advice to energy and renewable companies and developers, financiers and investors, and government and energy regulators across the lifecycle of renewable projects.

The Energy & Resources team works with clients to help them build, manage and protect their businesses, developing strategies to minimise risk, realise opportunities for growth, and deliver investor value. We bring deep industry experience together with legal expertise to bring the best of MinterEllison to clients and create lasting impacts.



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