AUSTRALIAN INFRASTRUCTURE INVESTMENT MONITOR 2023

INFRASTRUCTURE PARTNERSHIPS AUSTRALIA

Allens > < Linklaters

Infrastructure Partnerships Australia is an industry think tank and an executive member network, providing research focused on excellence in social and economic infrastructure. We exist to shape public debate and drive reform for the national interest.

For more information contact:

Adrian Dwyer
Chief Executive Officer
P +61 2 9152 6000
E adrian.dwyer@infrastructure.org.au

Mollie Matich
Head of Policy & Research
E mollie.matich@infrastructure.org.au

Jamie Harrison
Senior Policy Adviser
E jamie.harrison@infrastructure.org.au

Katie Dempsey
Policy Adviser
E katie.dempsey@infrastructure.org.au

Isaac Husarek
Policy Analyst – Infrastructure Projects
E isaac.husarek@infrastructure.org.au

For all media enquiries, contact:

Boronia Blow
Head of External Affairs
E boronia.blow@infrastructure.org.au

Allens is a leading international law firm with a long and proud heritage of shaping the future for our clients, our people, and the communities in which we work.

Through our global alliance with Linklaters, we've grown to offer our clients a worldwide network of 40 offices in 28 locations. We are privileged to hold some of the world's longest ongoing client relationships, stretching back more than 170 years, and to be trusted with their 'first-to-market' and market changing transactions.

Our market leading infrastructure, renewable energy, and project financing teams advise across the full lifecycle of infrastructure projects. They play an active role in the development of the markets in which we operate.

For more information please contact:

David Donnelly
Partner
Allens
P +61 3 9613 8112
E david.donnelly@allens.com.au

Kip Fitzsimon
Partner
Allens
P +61 2 9230 4170
E kip.fitzsimon@allens.com.au

CONTENTS

About the 2023 *Australian Infrastructure Investment Monitor*

Infrastructure Partnerships Australia and Allens are pleased to jointly present the 2023 edition of the *Australian Infrastructure Investment Monitor.*

This year's survey captures the views of international and Australian investors who together collectively own or manage over A$547 billion of infrastructure assets across the globe. The survey findings are furthered by a series of interviews with 11 senior Australian and international investors.

Our report provides a comprehensive view of investor appetite and sentiment. The report reveals insights into the drivers and challenges for infrastructure investors, which include sovereign wealth funds, pension funds, fund managers, banks and other infrastructure professionals.

Regular readers may note that this year's report has been retitled from '*Investment Report*' to '*Investment Monitor*'. This reflects an altered format in this year's report. The data and methodology remain unchanged, allowing for continuous comparison of this year's data to its historical dataset.

We would like to acknowledge the contributions of Glenn Byres, Headland Advisory to the research underpinning this report.

EXECUTIVE MESSAGE

The 2023 *Australian Infrastructure Investment Monitor* marks the eighth edition of this research, and it remains the most comprehensive sector-wide analysis of the trends, issues and opportunities facing current and prospective investors in Australian infrastructure. With the previous edition undertaken in the first half of 2022, this years report takes stock of investor sentiment across Australia's infrastructure market amidst a period of fiscal constraint and infrastructure pipeline reviews. Understanding how investors' priorities have shifted, and how they are approaching the current market, will be crucial to leveraging the private capital required to maintain sustained infrastructure investment.

Australia remains an attractive destination, but is slipping further behind overseas markets

The Australian infrastructure market continues to attract significant investor appetite, with 92 per cent of participants 'highly likely' to invest – the highest since 2018. However, as has been the case throughout this report's history, limited opportunities and competition for assets is challenging investors. For the second year in a row, North America has outperformed Australia as the region with the most compelling opportunities. Australia has slipped 11 percentage points overall and now sits 31 percentage points behind the USA, with recent developments such as the introduction of the *Inflation Reduction Act* seeing momentum continue to shift towards that region.

Investor appetite to buy into the energy transition is accelerating, but experience shows appetite is not always resulting in activity

Over recent years, governments have increasingly moved beyond rhetoric to concrete actions to support the energy transition. Mirroring this forward momentum, investors have ramped up their interest in renewable energy infrastructure investment, with 76 per cent of participants identifying renewable energy generation, and 68 per cent grid storage, as their most preferred asset class – the most for each asset class in this report's history.

While investor interest is reaching new heights, the pace of delivery of the energy pipeline has slowed over the past 12 months, with projects hitting an approval and delivery backlog. Hesitancy remains among investors, with a number of not insignificant hurdles facing the transition. Growing appetite for renewable projects is a welcome sign, however, industry and governments at all levels will have to work together to overcome these obstacles and shift from intent to action.

The rise of ESG continues to drive the decarbonisation movement, but Australia's 'E' credentials continue to slip further behind other global markets. With governments shifting focus to the social infrastructure task, leveraging the private sector's appetite for ESG-related projects will allow tax-payer dollars to be spent where they are most needed.

But inconsistent government intervention risks shorting out the transition

The past 12 months have seen increasingly frequent direct interventions in the energy market. Everything from establishing government-owned corporations to direct investments are increasingly becoming normalised. As the energy transition becomes progressively urgent, government intervention in the energy market is an inevitability. But, with 40 per cent of participants less likely to invest in energy transition infrastructure off the back of recent interventions, the question now turns to how, when, and where government intervention is best placed to provide certainty and direction to the market, without crowding out private investment, inadvertently undermining Australia's decarbonisation agenda.

The transport pipeline remains strong, but opportunities for private sector participation are declining

The pendulum of private investment is beginning to swing away from traditional investment sectors such as transport – which has been a focal point for private capital over the past two decades – towards social and energy infrastructure. This year, investor preference for every traditional transport infrastructure class – including road and rail – registered their lowest levels of interest in the *Australian Infrastructure Investment Monitor's* history. With a number of significant transport projects now at the tail end of opportunities for the private sector to participate, such as Sydney Metro, WestConnex, NorthConnex and Cross River Rail, investors are looking at where the next opportunities in transport will arise.

However, despite many questions being raised in the industry – and within this report – there remains a relatively robust pipeline of publicly-funded transport infrastructure, albeit lower than at its peak. The question now turns to how this forward pipeline can evolve to leverage private capital and alleviate stressed government balance sheets.

The forward pipeline will likely be bolstered with a growing regional pipeline of transport projects, as the energy transition sees a geographical shift of large-scale projects being delivered in regional locations. Regional transport projects will be increasingly required to provide the necessary infrastructure to facilitate the movement of materials and people to these locations, which have not before had to contend with projects of such significant scale.

While the cycle of investment in asset classes is inevitable, governments across the country will need to carefully balance their pipeline priorities to ensure we have the necessary infrastructure to accommodate forecasted population growth. This includes ensuring we provide enough transport services in both urban and regional locations and avoid landing in an infrastructure deficit in 15 years' time.

Demand pressures and supply constraints continue to weigh in on delivery

Ongoing capacity and supply chain constraints, coupled with skilled labour shortages, have contributed to the Australian infrastructure market hitting a delivery ceiling.

The delivery of the eye-watering energy transition and social infrastructure build – all with the transport 'megaproject' tail still wagging – will require coordination and collaboration between government and industry. With 44 per cent of participants agreeing they would like to see the pipeline resequenced, governments will need to ensure they balance delivery timeframes with the sector's capacity to deliver projects within the current environment of labour and skills shortages.

With pipelines under review and governments reaching their fiscal capacity, we need to look to the other sources of capital

With three wholesale reviews currently underway, and the Inland Rail review completed earlier this year, the Australian infrastructure market is showing signs of uncertainty. Federal and jurisdictional infrastructure programs are facing increased interrogation, with reviews considering a number of infrastructure projects and their remit. Ensuring the infrastructure pipeline remains both sustainable and deliverable over the long-term will require coordinated government effort.

With governments staring down the barrel of soaring debt and an uncertain economic outlook, leveraging private capital to deliver the infrastructure pipeline will be essential. Infrastructure Partnerships Australia has identified 52 greenfield projects across the country - representing $86 billion worth of opportunity – suitable for governments to engage private capital on.

Leveraging this capital will be key to delivering the infrastructure pipeline over the coming decade to avoid landing in a future infrastructure deficit. With governments and industry mobilising on the transition, getting the market settings right will be essential to deliver the best outcomes for taxpayers and ensure we have the social and transport infrastructure we need to cater for Australia's growing population.

Infrastructure Partnerships Australia thanks each participant for their contribution to the eighth *Australian Infrastructure Investment Monitor*.

Adrian Dwyer
Chief Executive Officer – Infrastructure Partnerships Australia

David Donnelly
Partner – Allens

Kip Fitzsimon
Partner – Allens

KEY FINDINGS

Investor appetite for Australian infrastructure returns to pre-pandemic heights

92 per cent of surveyed investors are 'highly likely' to invest or continue to invest in Australia

The maturity of the Australian market continues to attract investors

96 per cent

say Australia's strong knowledge of market participants and track record for infrastructure business makes Australia an attractive investment destination

Economic stability and the track record for infrastructure have increased

21 and 22 percentage points

respectively

But an overheating infrastructure market is holding investors back

88 per cent

agree the Australian infrastructure market is facing capacity constraints

44 per cent

would like to see governments resequence the pipeline

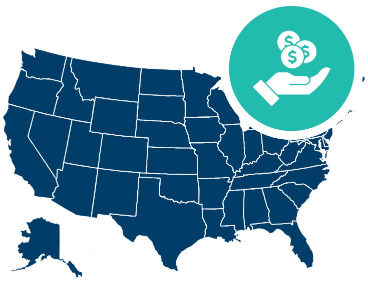
Value to be found fell

25 percentage points

Australia falls further behind North America

81 per cent

of those surveyed identified North America as one of the top regions for having the most attractive infrastructure investment opportunities



50 per cent

identified Australia as having some of the most compelling investment opportunities

The energy transition continues to accelerate for Australian investors

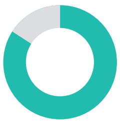
76 per cent
of participants identified renewable generation as an attractive asset class – the most in the report's history and most of any asset class this year

Just 12 per cent
said the same for non-renewable generation

68 per cent
expressed a preference for battery/short duration storage assets as one of the most attractive renewable energy asset classes – also the most in the report's history

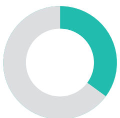
60 per cent
of participants identified energy transmission and distribution as a preferred asset class to invest in

Transmission networks, government intervention and policy and regulatory frameworks are presenting challenges to the energy transition



84 per cent
of participants believe having an adequate transmission network is the biggest challenge to delivering Australia's energy transition

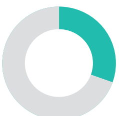
76 per cent
see having adequate policy and regulatory frameworks as a significant challenge in ensuring an orderly energy transition



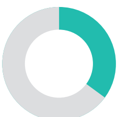
40 per cent
believe government intervention in energy markets makes them less likely to invest

Opportunities for private capital in transport are dwindling, with every asset class reaching record lows

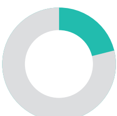
48 per cent
find road infrastructure attractive - 12 percentage points lower than its previous lowest



36 per cent
said the same for tunnels and bridges - nine percentage points lower than its previous lowest



40 per cent
identified passenger rail as attractive - one percentage point lower than its previous lowest



20 per cent
identified freight rail - 19 percentage points lower than its previous lowest

PARTICIPANT PROFILE

Participants have over
A$547 billion
in infrastructure investments globally

63 per cent
of the participants manage more than
A$10 billion
of investments

Nearly
60 per cent
hold more than half or all of their investments in Australia

Over
50 per cent
hold social infrastructure, renewable generation, roads, transmission and distribution, passenger rail and/or water infrastructure assets

INVESTMENT INTENTIONS

KEY FINDINGS

- **92 per cent of those surveyed are highly likely to invest, or continue to invest, in the Australian infrastructure market, and a further four per cent are considering investing over the next two years**
- **58 per cent believe Australia will provide sufficient infrastructure opportunities for investment, while 34 per cent believe this is unlikely over the next three years**
- **Investor appetite for 'green' infrastructure reaches record heights, with 76 per cent preferring renewable generation, and 68 per cent grid storage and firming**
- **Investors expressed an appetite for investing in water infrastructure (68 per cent)**
- **Investor preference for all forms of transport infrastructure reached their lowest levels in the report's history**
- **Preference for unregulated assets reached a record high of 46 per cent**

Appetite for Australian infrastructure returns to pre-pandemic levels

Investor appetite for the Australian infrastructure market has returned to pre-pandemic levels, with 92 per cent of participants highly likely to invest, and a further four per cent considering investing. The combined 96 per cent of participants actively considering investing in Australia is the highest level since 2018. Despite this interest, just 58 per cent believe Australia will provide sufficient opportunities over the next few years, as shown in Figure 2.

Figure 1: Likelihood of investing in Australian infrastructure

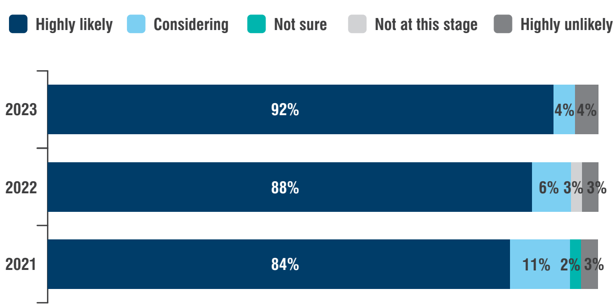
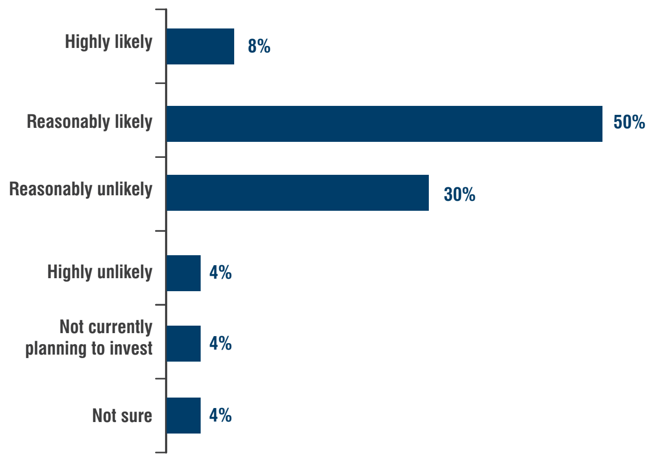


Figure 2: Sufficiency of opportunities in Australia over next three years



Appetite for the energy transition has reached new heights, with renewable energy infrastructure featuring in the two most attractive asset classes

For the first time in the *Australian Infrastructure Investment Monitor's* history, renewable energy infrastructure has become the most attractive asset class to investors, with renewable energy generation (76 per cent) taking first place, and grid storage and firming (68 per cent) equalling water infrastructure in joint second place (see Figure 3).

Casting a long-term view over historical results, renewable energy generation has grown to the most attractive asset class from just 36 per cent in the inaugural *Australian Infrastructure Investment Monitor* in 2015 – the third least preferred asset – and an all-time low of 20 per cent in 2016 – the least preferred asset class.

Delving deeper into the data, as shown in Appendix B: Figure 32, we can see that a total of 56 per cent of participants already invest in renewable energy generation, and a further 20 per cent are not currently investors but would consider it over the next three years.

Just 16 per cent of participants currently hold an investment in grid storage and firming, however, 52 per cent of participants who identified as not owning a storage and firming asset are interested in investing over the next three years. This indicates the market holds a lot of growth opportunities for participants looking at getting into the renewable energy space.

The significant shift to prioritising energy transition infrastructure, discussed further in the following sections, is a clear indication that private capital has shifted gears into the next phase of the transition.

Figure 3: Preferred Australian asset types to invest in

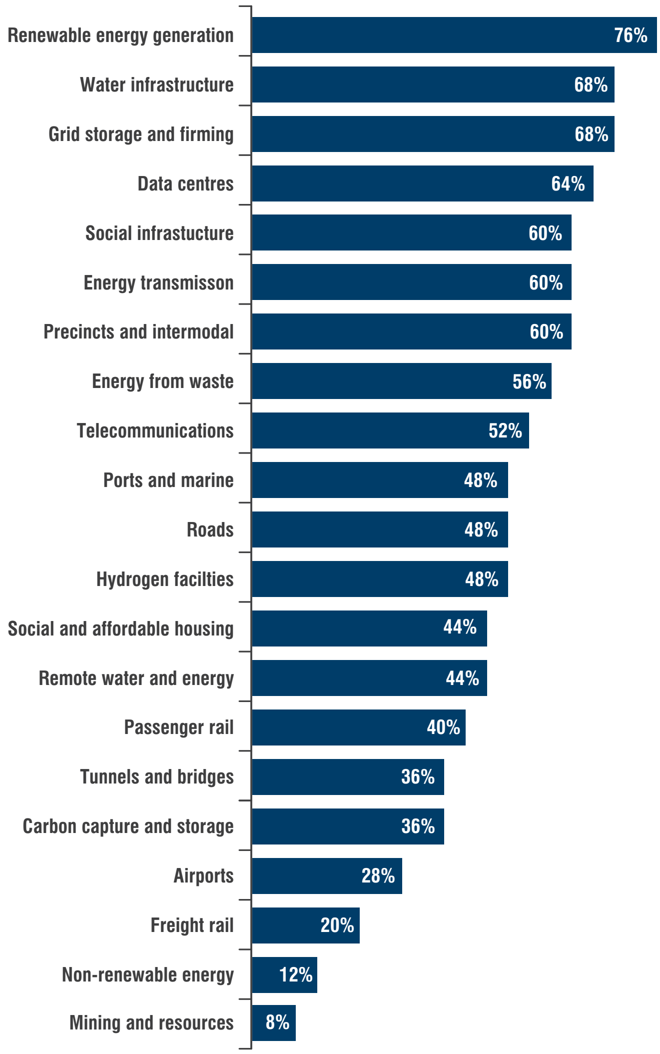
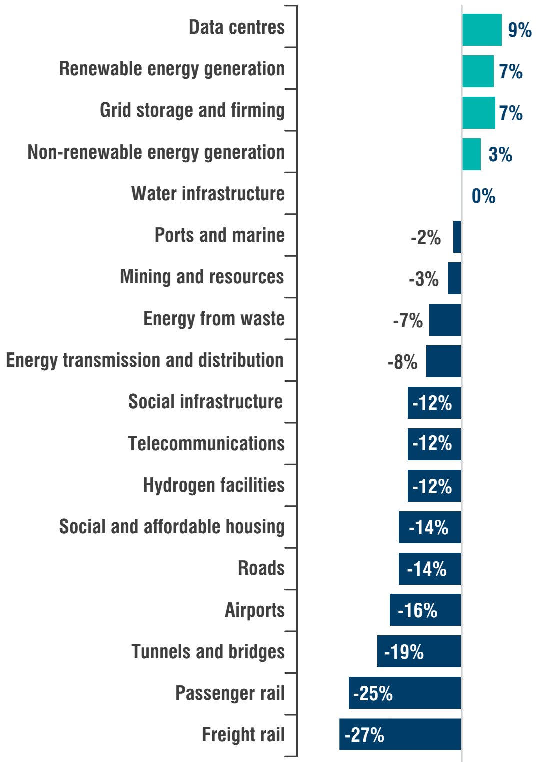


Figure 4: Preferred Australian asset to invest in, change in proportion of respondents vs 2022



"Every one is clamouring to find well-priced assets and opportunities in the green transition."

Institutional Investor

"Given the scale of the challenge of decarbonisation and meeting their own emission reduction targets, governments have no choice but to seek out every piece of private capital they can find."

Institutional Investor

While appetite is robust, there is a slowdown in the conversion of projects from announced to delivery, with a number of challenges facing the transition. Governments and industry will need to collaborate to address regulatory approval bottlenecks, and address capacity constraints in the market to ensure the delivery of Australia's energy transition infrastructure remains on track.

Water infrastructure remains attractive, but there are few opportunities for private capital

Despite preference for water infrastructure remaining stable from last year (see Figure 4), its attractiveness relative to other asset classes continues to grow, becoming the equal-second most preferred asset class, identified by 68 per cent of participants (see Figure 3).

However, despite sustained interest in water, interview participants noted a lack of opportunities for private capital to participate – especially off the back of recent elections.

> *“Water is an appealing asset class, as it is an ESG asset class – but I don’t see any great groundswell of supply to meet that appetite. Most of the governments that have been elected are anti-privatisation and water has been front and centre in that debate.”*
>
> Investment Bank

> *“I see no opportunity for investment in water generally. There are some discreet exceptions, with limited opportunities around desalination.”*
>
> Infrastructure Investor and Developer

Opportunities for the private sector in transport plunge, but the long-term build pipeline remains relatively robust

The market is showing clear signs that the level of private capital opportunities in the major transport infrastructure pipeline over the past two decades is beginning to abate. This year registered the lowest preference for every transport infrastructure category in the report’s history. Just 48 per cent of participants expressed appetite for roads – 12 percentage points lower than its previous lowest in 2021 and preference for tunnels and bridges reached just 36 per cent – nine percentage points lower than its previous lowest in 2015.

Meanwhile in rail, preference for both passenger rail (40 per cent) and freight rail (20 per cent) also faced a decline, falling 25 and 27 percentage points respectively compared to last year (see Figure 3 and 4) – the lowest registered response in the report’s history for both asset classes. After experiencing a 10 percentage point increase each last year, investors noted that pipeline agendas are shifting away from rail assets, and there is some ESG risk in freight.

> *“I don’t see passenger rail being reflected in the government pipeline at the moment.”*
>
> Global Investor

> *“The majority of rail projects have largely been procured. What’s left?”*
>
> Institutional Investor

> *“The type of freight being carried can be an issue – with ESG considerations being important in that regard given the heightened focus on it.”*
>
> Institutional Investor

Falling investor appetite for transport is indicative of the perceived lack of opportunities in the current forward transport pipeline. However, the publicly-funded transport pipeline remains relatively strong, despite a notable reduction in transport spending across the 2023-24 Budget Season.

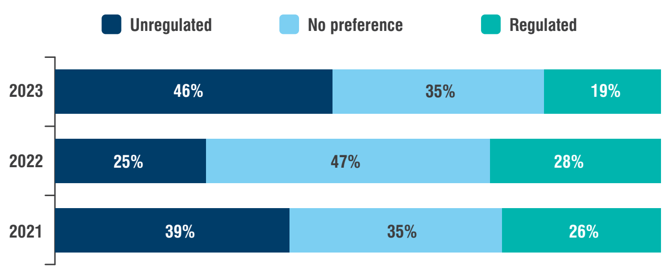
With Australia’s population set to grow to 40.5 million over the next 40 years, new transport connections will need to be delivered to service it. With governments’ fiscal capacity stretched, they will increasingly need to seek external financing of major infrastructure, including transport. So while there is a lack of private opportunities today, asset recycling and the private capital pathway must remain open.

Preference for unregulated assets returns in earnest

As forecast in last year’s qualitative analysis, unregulated assets reemerged as investors’ preferred regulatory model, reaching 46 per cent – the highest in the *Australian Infrastructure Investment Monitor’s* history, as shown in Figure 5. This year also registered the largest discrepancy between preference for regulated and unregulated assets in the report’s history – at 27 percentage points.

Last year’s report highlighted that while preference for regulated assets inched ahead of unregulated assets, it was likely to be a short-term trend off the back of the pandemic, and preference for unregulated assets would return.

Figure 5: Preferred regulatory model for investments



IN FOCUS: THE ENERGY TRANSITION

KEY FINDINGS

- **Battery/short duration storage assets are the most attractive renewable energy infrastructure asset**
- **Hydrogen and nuclear assets are the two least attractive renewable energy assets**
- **The need for an adequate transmission network is seen as the biggest challenge facing the energy transition**
- **40 per cent of respondents agree that government intervention in the energy market limits their willingness to invest**
- **83 per cent of respondents support to an extent the government putting a price on carbon or establishing a formal emissions trading scheme in the infrastructure sector**

The energy transition is underway and continues to attract investors, however, activity is yet to shift into full swing

As governments mobilise to reach net zero commitments and establish a stable future energy supply through transitioning our emissions intensive grid, investment in renewable energy infrastructure continues to dominate investor preferences.

> *"The energy transition is likely to fill the void as there is an immense amount of capital that needs to pour into that space."*
> Infrastructure Investor and Developer

> *"There's vast opportunity to invest in generation and storage to replace the retiring coal fleet. Accelerated announced closures are a key driver as they go hand in hand as an alternative to intermittent generation."*
> Investment Bank

While appetite for investment in the energy transition continues to dominate the market, intent has yet to fully transpire into activity. A number of challenges remain with the energy transition, which require a coordinated approach to provide a clear pathway for investment and roll out of projects.

Investors indicated preference for investment in short and long duration storage, however, remain cautious of pumped hydro

Despite renewable generation being identified as investors' preferred asset (see Figure 3), battery and short duration storage projects were seen as the most attractive renewable energy infrastructure asset class for investors, with 68 per cent of respondents identifying these assets, as shown in Figure 6. This indicates that there remains a preference for more established markets in generation, even if they are slightly less lucrative.

> *"Storage projects are pretty compelling. They carry less development risk than some other assets and they've got a great ESG profile."*
> Institutional Investor

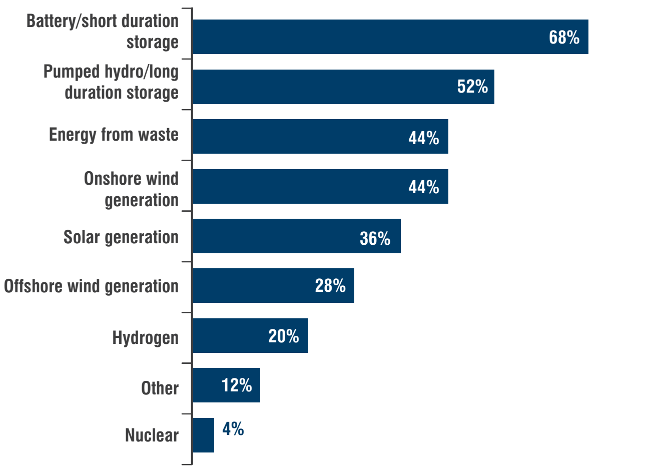
> *"The generation side is still very expensive given the extent of demand – they are as hot as ever. Grid storage is not as difficult as there are still opportunities to make money."*
> Super Fund Manager

Meanwhile, 52 per cent of respondents selected pumped hydro/long duration storage projects as a preferred energy asset class for investment. However, while survey respondents indicated strong interest in pumped hydro projects, some interviewees noted caution around their perceived risks.

> *"I think the issue is who takes the initial development expenditure risk because they are complex construction and development projects. Infrastructure investors would be happy to own pumped hydro but that initial risk is difficult for investors, particularly with supply chain and skill labour challenges."*
> Global Investment Adviser

> *"People are spooked by the development and construction risks we've seen on projects. Solve that, and investors will leap in."*
> Investment Bank

Figure 6: Which renewable energy infrastructure asset classes are attractive to investors



The jury is still out on hydrogen and nuclear

As shown in Figure 6, hydrogen (20 per cent) and, unsurprisingly, nuclear (four per cent) registered two of the least preferred asset classes. While a lack of interest in nuclear can be attributed to its deployment infancy in Australia and the Federal Government's historic nuclear prohibition as an electricity source, the lack of interest in hydrogen indicates that, while it is mooted as a technology with capability to transition hard-to-abate sectors, investors remain uncertain about its realistic application and delivery in the near-term.

Having an adequate transmission network is the biggest challenge to Australia's energy transition

When asked about the biggest challenges to delivering Australia's energy transition, 84 per cent of respondents identified having an adequate transmission network as their primary concern, as shown in Figure 7. The Australian Energy Market Operator (AEMO) estimates that 10,000 kilometres of transmission lines in the National Electricity Market will need to be constructed by 2050 if Australia's legislated net zero ambitions are to be enabled.[1]

Interviewees shared this trepidation, and highlighted concerns of Australia's slowing progress in delivering the renewable generation, storage and transmission. In particular, interviewees noted some of the key challenges to delivering the transmission network, including land acquisition, social licence, environmental approvals and high costs.

"This is the biggest issue in Australian infrastructure. You need to invest into the network, but the high cost of debt and equity is jumping massively. You could find that consumers are doubling their power prices."

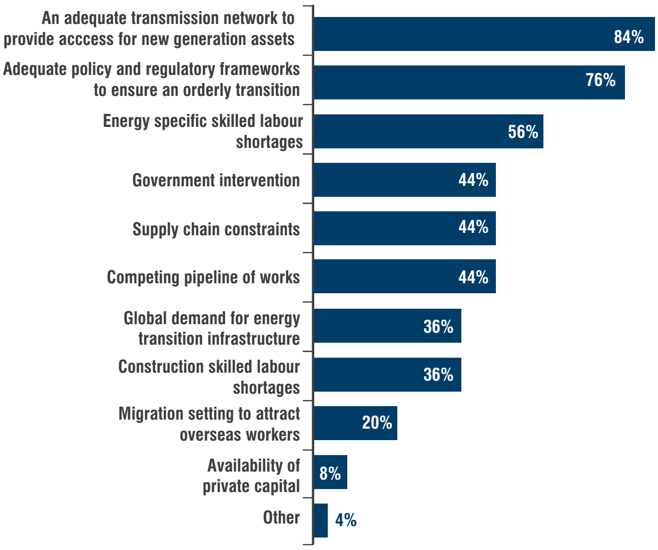
Super Fund Manager

"Government has a role to play and kickstarting it via better approvals and other support – whether it's monetary or non-monetary."

Investment Bank

1. AEMO (2022) Integrated System Plan

Figure 7: Challenges to delivering Australia's energy transition



As a consequence of these challenges, interviewees expressed uncertainty as to whether Australia will reach its energy reduction targets by 2030.

"It's looking increasingly challenging given key pieces of infrastructure are missing or just not moving. We're seeing a backlog of approvals for renewable projects because the transmission network is not there, and it's now at a point of slowdown."
Institutional Investor

"I've not met a single person in the ecosystem that believes there is any possibility of meeting the 2030 target. It's mathematically impossible today – with the current framework for approvals, construction costs and timelines, the procurement methods."
Institutional Investor

However, participants also expressed some optimism around the potential of transmission networks to meet the demand of the energy transition, citing the NSW Government's approach to Renewable Energy Zones.

"NSW has put together a terrific model with the Renewable Energy Zones that gave investors a lot of faith. There are still some challenges regarding transmission, but they're a mile ahead of other states."
Institutional Investor

"NSW is the most progressed and has some runs on the board. Providing that planning framework is very helpful. You need to know where the projects can go and what they'll connect into."
Institutional Investor

Government intervention is making investors wary of the transition

There is a careful balancing act needed for government intervention in the energy market to determine how Federal, state and territory governments, and the private sector can focus their attention and play to their respective strengths to deliver the transition. As shown in Figure 7, 76 per cent survey respondents identified having adequate policy and regulatory frameworks in place to ensure an orderly energy transition as the second biggest challenge to the transition.

Meanwhile, 40 per cent of respondents reported that direct government intervention in the energy market over the last year has made them less likely to invest in the Australian energy market, while 48 per cent responded that such interventions haven't changed their likelihood to invest (see Figure 8). However, participants also noted that government intervention in markets is not a new concept – and is a risk that is priced accordingly.

"We're supremely nervous. It should theoretically be a massive payday for investors but there is a sovereign risk from how much consumers can stand and how governments respond."
Super Fund Manager

"Governments are now moving into sectors they haven't been in for 20 or 30 years, so it creates a bit of fear and anxiety for people who like a market dynamic that supports medium and long-term returns. Government intervention of that scale makes investors wary when they're trying to assess returns in 15 years' time."
Institutional Investor

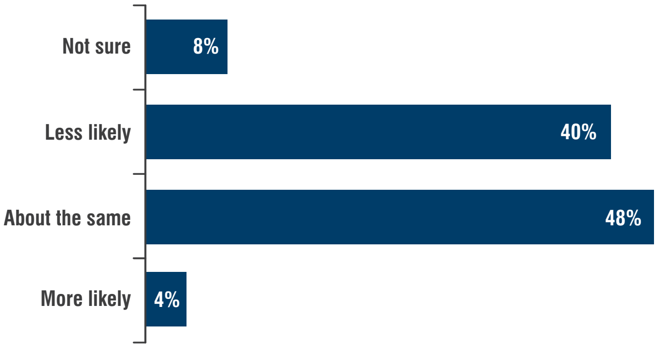
"I think infrastructure investors are used to taking regulatory risk. It's just a risk that needs to be priced. There'll always be sensitivity around energy pricing. But investing into the energy transition is an unstoppable train."
Global Investment Adviser

After decades of being viewed as laggards, Australia's governments have taken to the energy transition task at a rapid pace over the past 18 months. This acceleration – while necessary and precisely the push Australia needed to provide policy guidance for its transition – has resulted in a 'catchup effect', with governments using piecemeal approaches to support the transition – not necessarily delivering the most cost- or time-efficient pathway to net zero.

Governments now need to take stock of their commitments and policies, and ensure they develop the right settings to ensure interventions in the energy market do not have unintended consequences of crowding out private capital and inadvertently delay the transition.

> *"I think the reality is they are political announcements. If Victoria sets up an entity that co-owns a couple of renewable assets it is not even relevant to the market and is inconsequential. No one will notice beyond the press releases. It won't do or achieve anything. Everyone was terrified pre-election, and when the detail came out everyone was mightily relieved."*
>
> Institutional Investor

Figure 8: Impact of government interventions in energy markets on investors' likelihood to invest in energy transition infrastructure



Carbon pricing recognised as a key opportunity to drive the transition

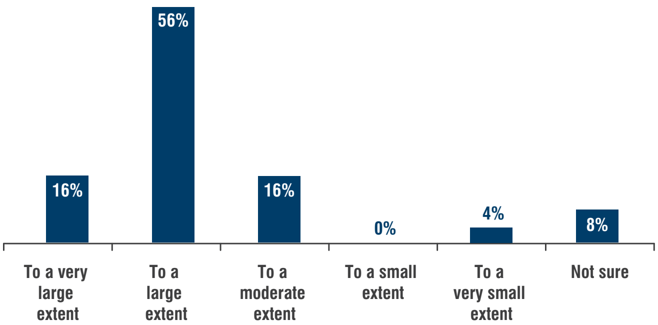
Investors indicated a strong preference for the Federal Government to introduce carbon pricing or establish a formal emissions trading scheme in the Australian market, with 72 per cent of respondents supporting its creation to a large or very large extent (see Figure 9). Interview participants noted the opportunities of carbon pricing to provide strong incentives for further investment in energy transition infrastructure.

> *"It's very hard for investors to quantitatively value carbon and when you're investing in, or divesting assets, commercial returns are an objective number. A dollar number against carbon makes it is easier to be calculated in your return number."*
>
> Investment Bank

> *"It's a more pure way of trying to address the problem, as the market will set itself to a natural level and the price can be turned up or down over time to accelerate the need for the program."*
>
> Super Fund Manager

> *"We spent 10 years as a country running away from a carbon price when it is the obvious answer to shifting the dial in a rational way."*
>
> Institutional Investor

Figure 9: Extent of support for the Federal Government putting a price on carbon or establishing a formal emissions trading scheme



EMERGING MARKET CONDITIONS

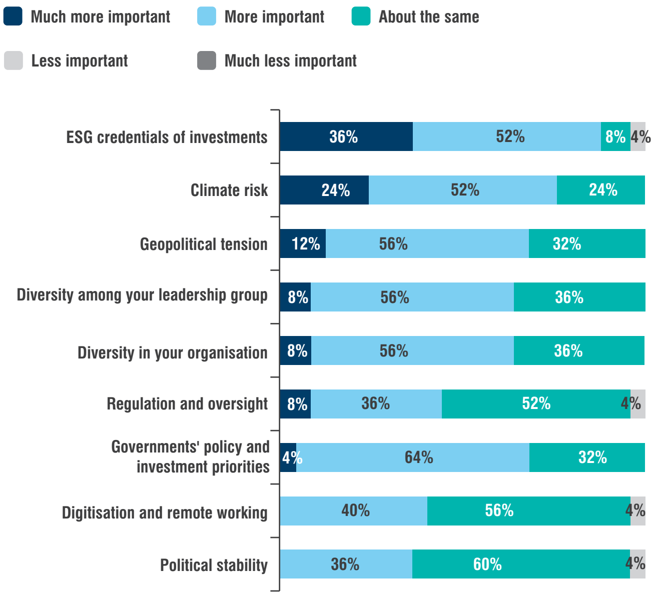
KEY FINDINGS

- **88 per cent believe ESG credentials have become more important as investment considerations compared to last year**
- **76 per cent say the same for climate risk**
- **Investor/client expectations or directives was identified as the biggest driver of the shift to ESG investment, followed closely by reputational risk and the desire to drive positive change**
- **46 per cent believe ESG frameworks are useful for assessing and reporting on ESG credentials in projects, down eight percentage points**

The drive for ESG is leading the energy transition

The ESG credentials of projects (88 per cent) and climate risk (76 per cent) have remained the two most important factors to investors since last year, as shown in Figure 10. With both factors growing in importance over the last 12 months, it is clear that environmental factors are at the forefront of investor's minds.

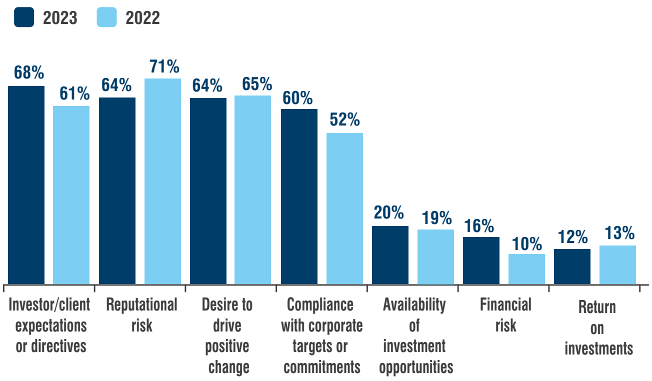
Figure 10: Factors that are more important to investors compared to last year



Expectations from investors and clients is driving ESG

When asked what factors are driving the shift toward ESG investments, 68 per cent of respondents identified investor or client expectations or directives, as shown in Figure 11. This was followed closely by reputational risk (64 per cent) and the desire to drive positive change (64 per cent).

Figure 11: Key drivers of the shift to ESG investments



Decarbonisation progress hasn't materially improved our 'E' credentials

Australia's comparative 'environmental' performance has dropped further compared to last year, with 40 per cent of respondents saying Australia's 'E' performance is 'below average' and a further eight per cent reporting it as 'one of the worst', as shown in Figure 12. An additional 32 per cent report it as 'average'. This is an increase from 2022, where 29 per cent recorded environmental performance as 'below average' and 29 per cent as 'average'.

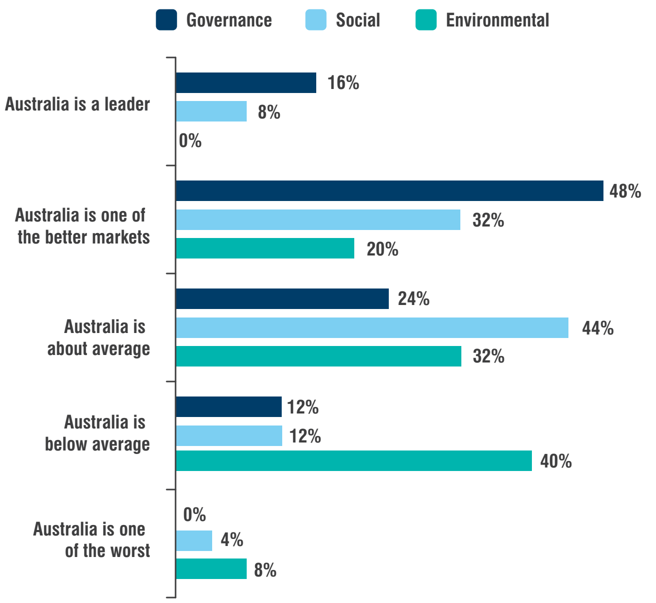
> *"By international norms, we're still quite high emitting from our energy fuel base and we were a little slower to the party than European countries with net zero commitments."*
>
> Investment Bank

However, some interview participants noted that Australia's perceived poor historical performance in the 'E' element of ESG is an opportunity to attract investors to the Australian market over the coming years.

"I think Australia suffers from a credibility issue on the world stage. But investors will come here because they see the opportunity to make a difference. That it is seen as a laggard provides an opportunity for those with the capability."

Global Investor

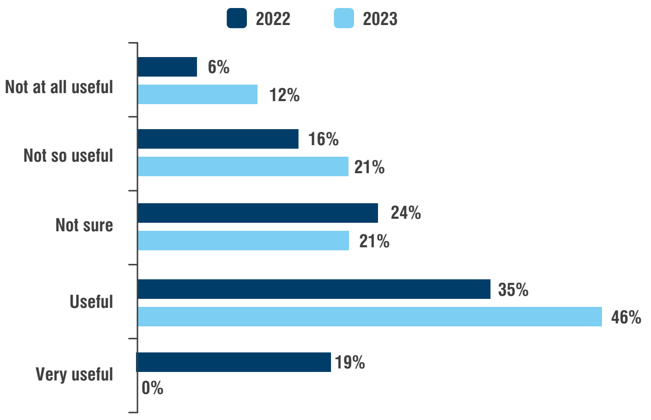
Figure 12: Australia's performance in ESG elements



ESG frameworks slip further behind

While ESG is accelerating as a key driver of investment, the frameworks for assessing and reporting on project performance against ESG credentials is lagging. Just 46 per cent agreed that ESG frameworks are useful or very useful in assessment this year, down from 54 per cent last year, as shown in Figure 13. Further, 33 per cent identify them as 'not so useful' or 'not at all useful', up 11 percentage points from last year.

Figure 13: Usefulness of ESG frameworks for assessing and reporting on ESG credentials of projects



There's an opportunity for governments to align ESG goals with pipeline plans for social infrastructure

Federal and state and territory governments have foreshadowed a rise in the need for further investment in social infrastructure, including housing, over the coming years to cater to Australia's growing population. However, this year's *Investment Monitor* has seen investor preference for social infrastructure fall by 12 percentage points and preference for social and affordable housing fall by 14 percentage points (see Figure 3).

Despite this drop in the quantitative data, interviewees expressed an interest in exploring social infrastructure Public Private Partnerships (PPPs), noting the appeal of social infrastructure projects as a legacy-leaving asset class and their ability to achieve ESG-related goals.

> *"Social infrastructure probably has more levers you can pull than just construction price or how you're going to build it. In the case of a hospital, it can be how you respond to the health design requirements. There are more opportunities to differentiate yourself from competition than [a] straight price shoot out."*
>
> Infrastructure Investor and Developer

However, interviewees also identified key challenges associated with social infrastructure, which prevent attracting large levels of private capital.

> *"We'd love to look at housing, but the structure of the projects is going to be crucial."*
>
> Institutional Investor

> *"The basic problem for a lot of the super industry is that anything in the PPP market is mid-market in terms of size of the cheque. They need larger opportunities given the way they are regulated and the Your Future Your Super requirements, and you can't get them in social infrastructure."*
>
> Infrastructure Investor and Developer

In order to deliver the planned and required social infrastructure pipelines, governments will need to adjust how they procure, plan and deliver social infrastructure in order to attract the private capital required to deliver the pipeline. The ESG component of social infrastructure is enough to attract investors – governments now need to get the commercial settings, project packaging and procurement approaches right to encourage social infrastructure PPPs and leverage the available private finance.

THE AUSTRALIAN INFRASTRUCTURE MARKET

KEY FINDINGS

- Over half of respondents believe Australia's policy settings are not effective in attracting overseas skilled labour
- Economic stability, strong knowledge of market participants and track record of infrastructure business remain the top attractions for Australian infrastructure
- Transparency increased by 22 percentage points
- North America surged ahead of Australia as the region with the most compelling investment opportunities
- The cost and complexity of bidding were identified as the top two challenges of the Australian market
- 88 per cent believe the Australian infrastructure market is facing capacity constraints
- 40 per cent would like to see governments resequencing major project pipelines to manage capacity and budget constraints

As in previous years, the majority of investors identified economic stability (96 per cent) – a 21 per cent recovery following a drop in last year's report – and strong knowledge of market participants (96 per cent) – a record high in this report's history (see Figure 14) – as the most attractive elements of the Australian market. However, a 22 percentage point improvement in transparency, also reaching its highest level, indicates Australia's governments have worked hard and successfully to deliver a longer and clearer vision of the infrastructure pipeline.

Figure 14: What makes Australia attractive for infrastructure investment?

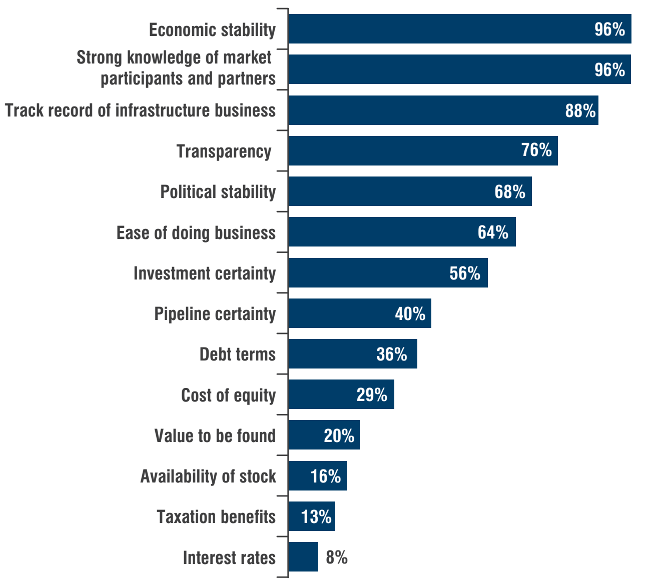
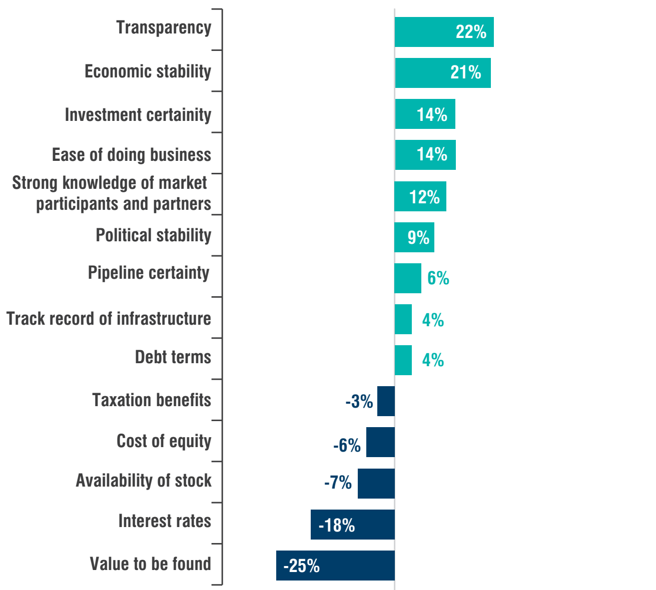


Figure 15: What makes Australia attractive for infrastructure investment, compared to 2022



Australia's position remains stable but slips further behind North America

Australia remains as a popular destination for investors, however, it has slipped further behind North America after being eclipsed in 2022. Since 2021, the proportion of respondents citing Australia as a region with compelling opportunities has declined from 61 per cent to 50 per cent. This contrasts with North America, which has nearly doubled as an attractive location in the space of two years.

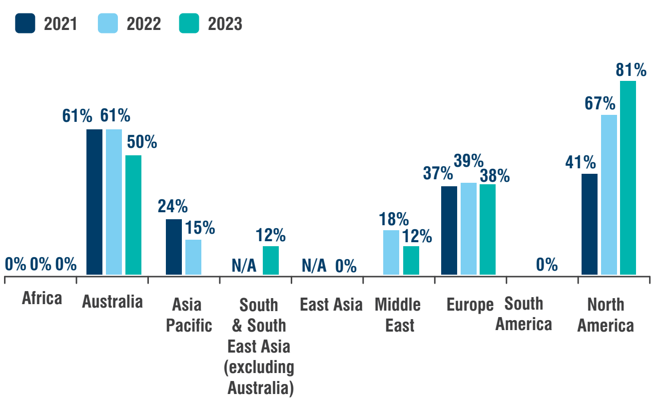
Investors cited the *Inflation Reduction Act* as the largest factor in this rise, and the pool of opportunities that have recently emerged. Additionally, investors cited the fact that the US provides a far less crowded market for rapidly growing Australian funds to invest in.

> *"Where the big pick up in the US is in the energy space, which is attracting a lot of capital at this point in time thanks to the Inflation Reduction Act."*
>
> Institutional Investor

> *"It comes down to the size of the market, the fact there are more opportunities. It's sophisticated like Australia – but there's less investor money chasing assets compared to all the super funds here."*
>
> Investment Bank

> *"There have been some extraordinary incentives tabled in America, particularly around the energy transition. There's much more certainty and a lot less concern around governments changing the rules."*
>
> Institutional Investor

Figure 16: Regions with most compelling opportunities



Opportunities for private capital are going begging

The slowing pace of new opportunities in the Australian market has dissuaded many investors who are struggling to identify opportunities for returns, contributing to the precipitous drop in ranking. Just 16 per cent of participants identified availability of stock as an attraction (see Figure 14), and 32 per cent identifying a lack of opportunities as the most significant challenge facing Australia (see Figure 17).

> *"The number of opportunities has slowed up. I don't think the returns have come down here but they have gone up in major overseas markets so it's a relative piece."*
>
> Super Fund Manager

> *"I think it's a combination of being a small market, with supply and demand challenges. Australia is in the top five markets globally for superannuation funds and that asset class is going to keep increasing – driven by compulsory super."*
>
> Investment Bank

> *"Big rail, road and airport projects have dried up, the social infrastructure pipeline is thin."*
>
> Global Investor

While a lack of available opportunities in Australia's smaller market is inevitable – and a sign of a healthy and competitive market – these findings should be sending alarm bells to governments who are facing soaring debt and fiscal constraints. The economic and fiscal benefits of leveraging private capital and investor appetite for opportunities can unlock public funding to be spent where it is needed most. In the face of the economic challenges currently facing the country, governments will need to take dynamic and open approaches to how they harness private capital to deliver the infrastructure pipeline.

> *"There is still reasonably strong demand for a smaller market. It's a stable government, strong and growing economy and good reputation. But the consequence is prices are high and returns are lower."*
>
> Global Investor

Private capital can deliver the pipeline and navigate fiscal constraint

A diverse infrastructure pipeline calls for a diversity of procurement and delivery solutions. PPPs provide an opportunity for governments to leverage the capital and expertise available in the private sector to deliver infrastructure projects.

According to data from the Australian and New Zealand Infrastructure Pipeline (ANZIP), at the time of publication, there are currently 14 projects either awarded or under delivery as PPPs. There are a further 40 projects on ANZIP with opportunities for private capital PPPs in the pre-tender stage of the pipeline, worth a total of $72.9 billion.

Despite this raft of opportunities to offset the cost of delivering infrastructure, investors continue to see a slowdown in the PPPs opportunities available for investment.

> *"It's an underwhelming greenfield PPP pipeline. Government budget repair is likely to lead to lower infrastructure spend over medium term."*
>
> Investment Bank

> *"The asset recycling initiative should be rebadged. You've got to believe building infrastructure is the optimal mix of public and private investment. Governments are better placed to pick up greenfield risk on projects like health or transport infrastructure, and then recycle those when demand is sustainable."*
>
> Institutional Investor

> *"Privatisation is slowing and the secondary market is thin. It means a lot of Australian investors are heading overseas as returns are better in a relative sense."*
>
> Investment Bank

Most significant challenges to investing in Australian infrastructure

Challenges to investing in the Australian infrastructure market remained relatively stable over the past year, with the largest challenges including capacity constraints, the cost and complexity of bidding, and competition in for limited opportunities.

The cost of bidding remained the largest challenge nominated by respondents, identified by 60 per cent of participants. This remains the third year in a row as the greatest challenge for investment, however, some interviewees indicated that while this has been a consistent challenge for investors, it is the natural result of a competitive market and diligent procurement process.

> *"The PPP framework in Australia is set up in a way that means we've never had a deep enough market to have a standardised approach. What we also see is that the requirements for a $5 billion metro rail project start to creep into the requirements for a $500 million hospital."*
>
> Infrastructure Investor and Developer

> *"I've heard that line for 20 years now and never seen a shortage of bidders on any project."*
>
> Institutional Investor

Figure 17: Most significant challenges to investing in Australian infrastructure

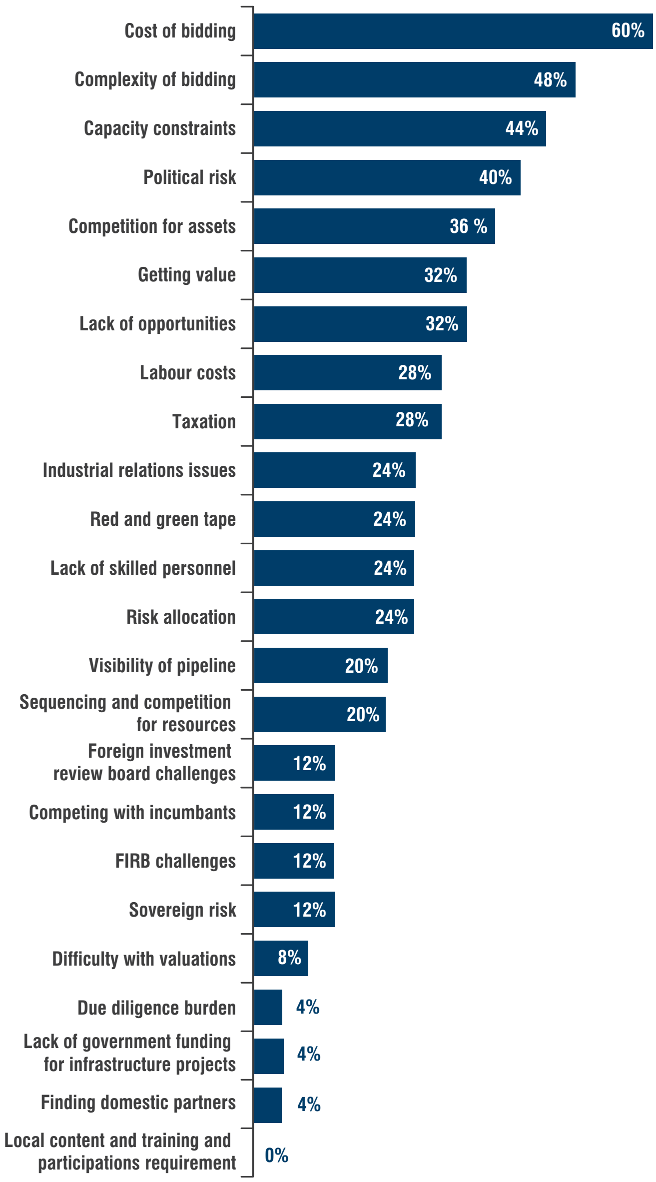
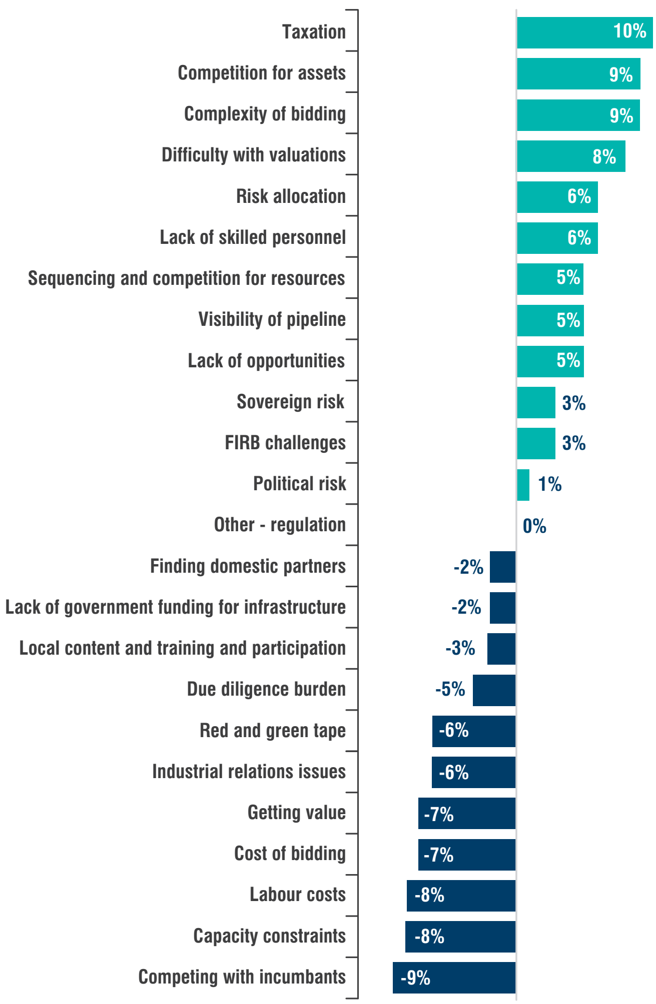


Figure 18: Most significant challenges to investing in Australian infrastructure, compared to 2022



Capacity constraints are being punctuated by labour shortages

The impact of capacity constraints was more pronounced this year, with 88 per cent 'agreeing' or 'strongly agreeing' that the market is facing capacity constraints – a three percentage point increase on last year, and the highest since 2019. Interview participants noted that the majority of capacity constraints are being felt in access to skilled labour, both internationally and through competition between asset classes for skills.

Despite capacity constraints gripping the market, just 28 per cent identified labour costs as a significant challenge, and 24 per cent for access to skilled labour (see Figure 17). However, interview participants strongly challenged these findings, identifying the heightened cost of labour, and access to skills as being a driving force behind increased construction costs and capacity to deliver projects.

"Every day we talk to contractors, operators, service providers, consultants; you name it – the lack and cost of labour is always nominated and the first thing people talk about. The inability to attract people is a real issue."

Institutional Investor

"Labor costs are a real issue and we're seeing it on multiple levels. The cost issue is a major one because to the extent there are constraints it leads to changes in pricing dynamics. We've seen projects become unviable because of construction costs."

Institutional Investor

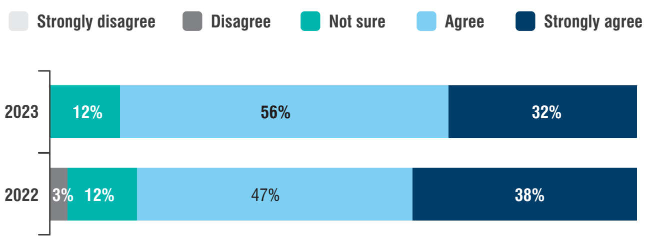
"If you think COVID presented a challenge, wait till we realise we're competing for talent in the race to build a renewable energy network so mammoth in scale."

Institutional Investor

"We're spending historical amounts on infrastructure at a time when the construction sector was busy and we've got more restrictive immigration policies than other markets."

Investment Bank

Figure 19: Capacity constraints in the Australian infrastructure market



Governments could do more to accelerate international skilled migration

Over half of respondents believe that the current policy settings surrounding overseas skilled labour require improvement, with 52 per cent of respondents identifying the current policy environment as 'not very effective', as shown in Figure 20. Interviewees indicated that while the Federal Government is working to address the issue, access to skilled labour is going to remain a challenge over coming years, especially in the context of the significant energy transition task ahead.

"It's easy to forget just how restrictive Australia's policies were compared to other major markets. It'll take a few years for the migration program to deliver what's needed on both skills and volume."

Investment Bank

"You can see the [Federal Government] have got a plan to keep crunching through the challenge of attracting the talent the nation needs, but it'll take time to pay dividends."

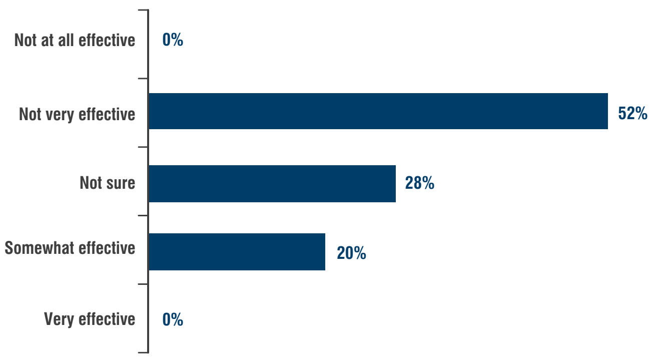
Infrastructure Investor and Developer

"If you think COVID presented a challenge, wait until we realise we're competing for talent in the race to build a renewable energy network so mammoth in scale."

Institutional Investor

With the significant pressure that the scale and magnitude of the infrastructure pipeline is placing on labour demand, governments will need to implement a two-pronged solution through attracting and retaining overseas talent, while also investing in domestic skill capabilities.

Figure 20: Effectiveness of Australia's policy settings in attracting overseas skilled labour



An overheating market is leading to some calls to resequence the pipeline

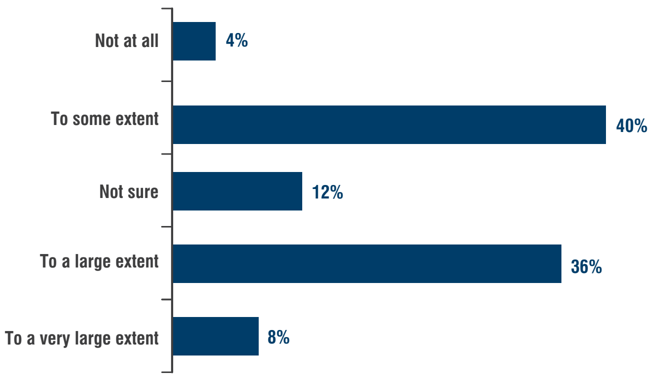
Investors are split on whether governments should resequence major project pipelines, with 44 per cent in favour of resequencing the pipeline, and the same preferring to maintain the pipeline's current schedule, as shown in Figure 21.

The ongoing uncertainty created by Federal and state infrastructure reviews has somewhat subdued the pace of the infrastructure pipeline, and the resolution of these reviews will bring much needed relief to awaiting investors. Interview participants stressed the importance of reevaluating the pipeline in the context of economic uncertainty.

"There's the holy grail of having a coordinated market around understanding the priorities with good lead times so you can shift your resources around – and governments would benefit from more competition with a transparent view of the pipeline."

Infrastructure Investor and Developer

Figure 21: Extent that respondents would like to see governments resequence major project pipelines to manage capacity and budget constraints



APPENDIX A: METHODOLOGY & PARTICIPANT PROFILE

Methodology

This report provides a unique insight into the preferences, intentions and sentiments of major market participants who have invested or are considering investing in the Australian infrastructure market.

The report draws on both quantitative and qualitative research to provide insights into the perceptions of investors about Australian infrastructure and the factors that influence their decisions.

In the second quarter of 2023, we conducted a quantitative survey of 27 senior market participants to understand investment trends in Australian infrastructure.

We followed the survey with detailed qualitative interviews with 11 leading Australian and international infrastructure investors to gain a deeper insight into the observed investment themes.

As the eighth edition in this series, the report also identifies changes in investment intentions over time and investigates the underlying causes of observed trends.

Participant Profile

The market participants surveyed are senior representatives of major infrastructure organisations with over A$547 billion invested globally, including banks, fund managers, superannuation funds, pension funds, investors, investment managers and infrastructure constructors and operators.

- 63 per cent of the participants manage more than A$10 billion of investments
- Nearly 60 per cent hold more than half or all their investments in Australia
- Over 50 per cent hold social infrastructure, renewable generation, roads, transmission and distribution, passenger rail and/or water infrastructure assets

Figure 22: Approximately how much in total do you currently have invested in infrastructure globally?

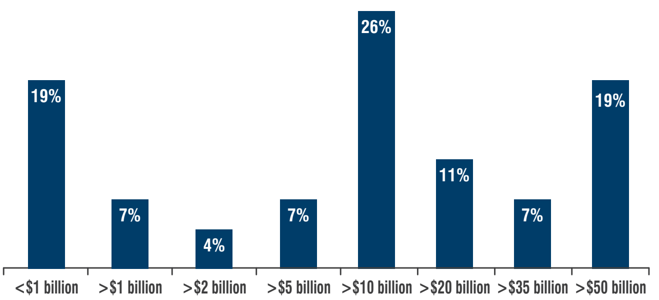


Figure 23: What proportion of your investments are in Australia in 2023?

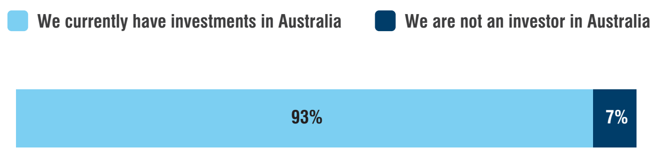


Figure 24: What proportion of your infrastructure investments are in Australia?

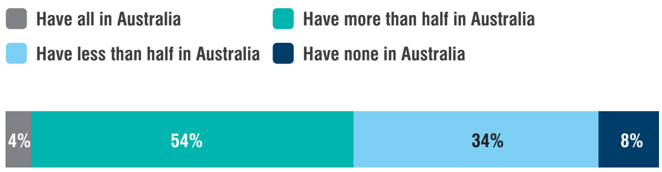
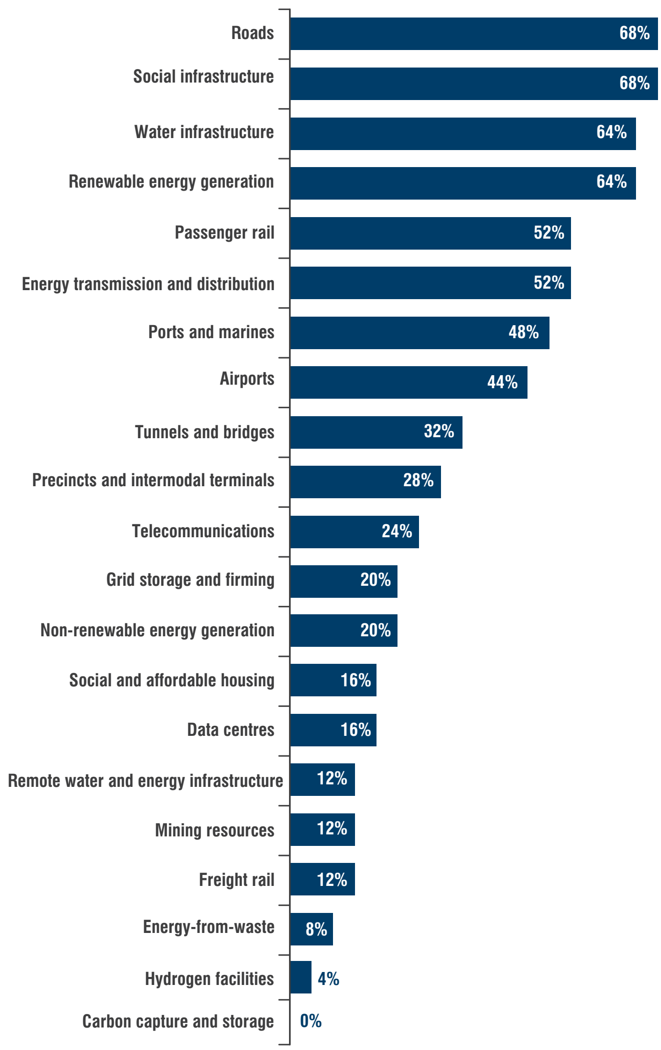


Figure 25: What types of infrastructure projects do you currently invest in, in Australia?



APPENDIX B: ADDITIONAL DATA

Investor Preferences

Figure 26: Do you prefer investing in greenfield projects, brownfield projects, or major expansions to existing assets?

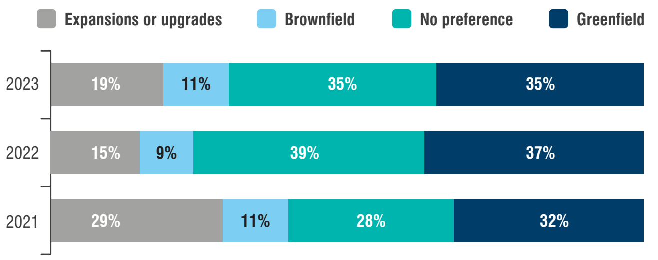


Figure 27: Assuming there were enough projects of the right size and type, what is the combined total amount that you would be comfortable investing in Australian infrastructure projects?

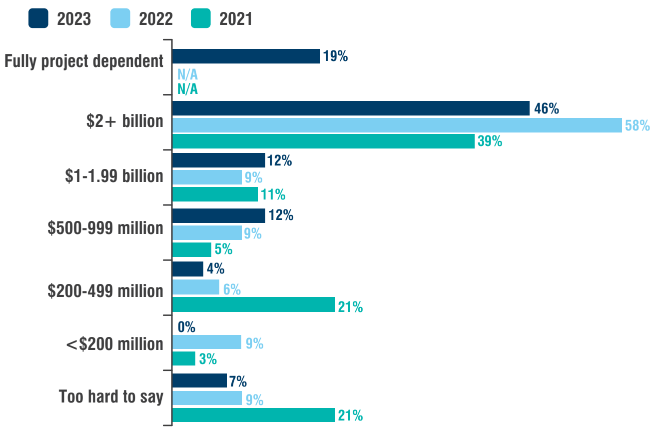
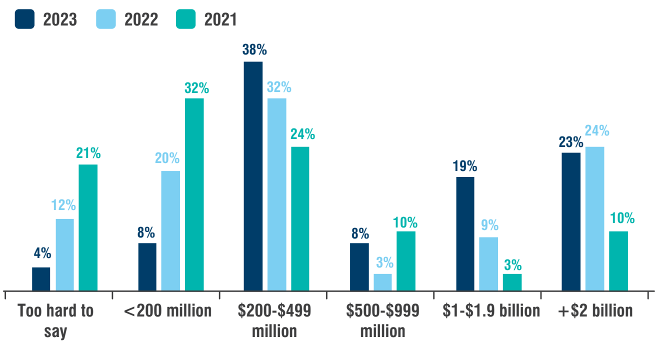


Figure 28: Assuming there were projects of the right size and type, what is the maximum size of a single investment in an infrastructure project that you would consider in Australia?



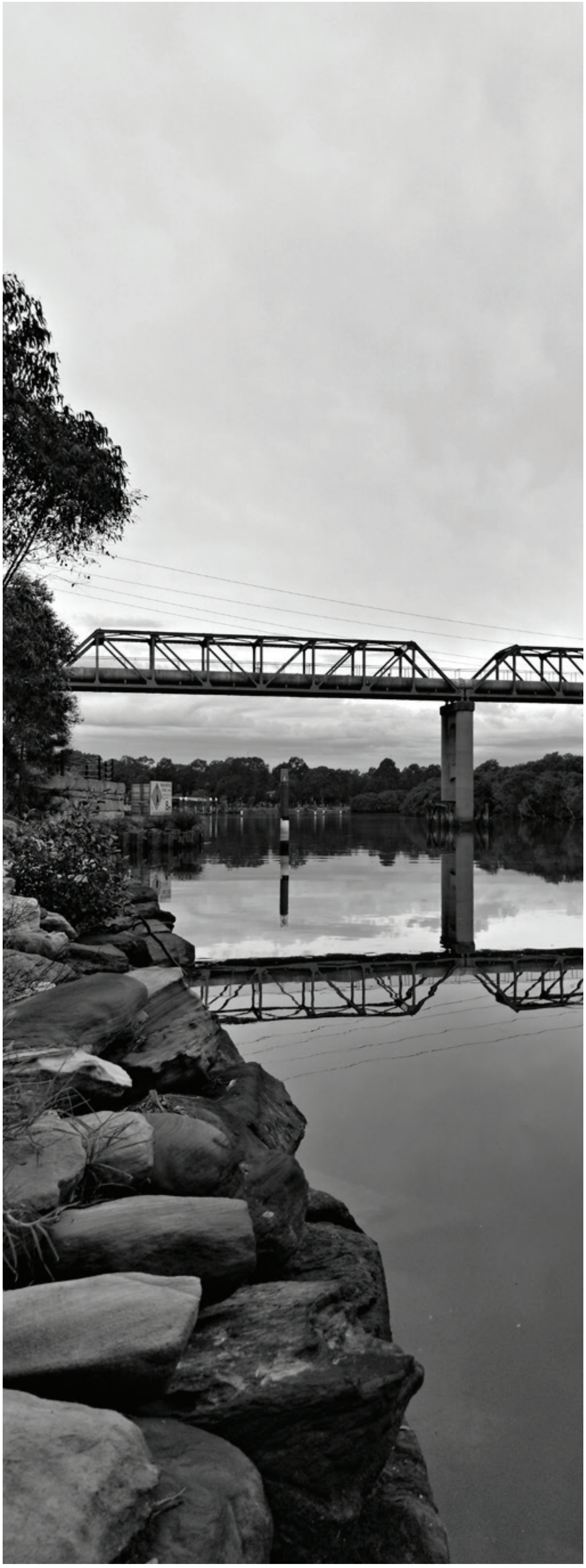
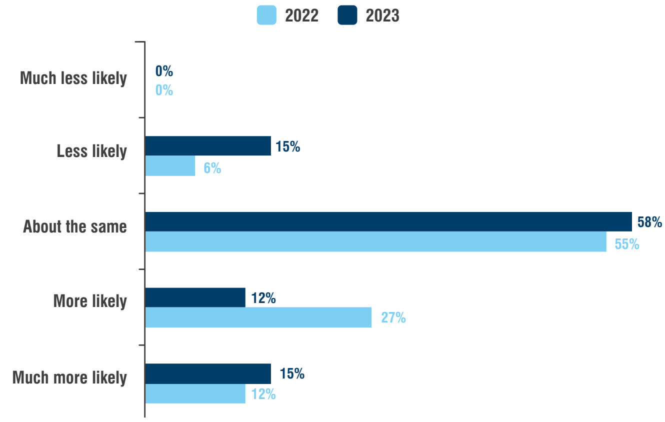


Figure 29: Are you more or less likely to engage in M&A activity compared to a year ago?



Energy Transition

Figure 30: To what extent would you support governments procuring infrastructure projects using a Time, Quality and Cost + Carbon framework, in order to procure lower carbon outcomes?

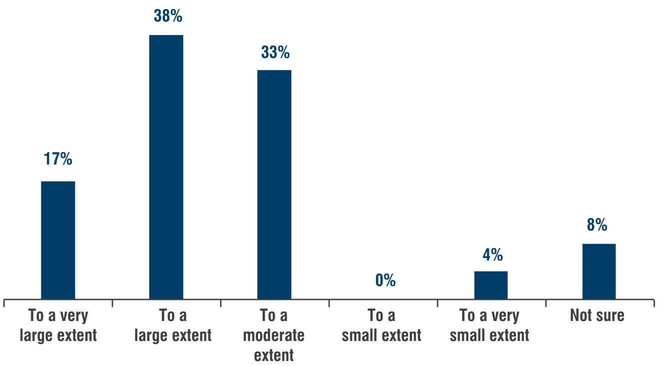


Figure 31: How important are Scope Three emissions as a consideration in investment decision making?

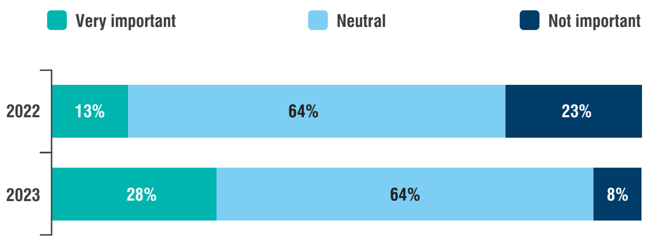
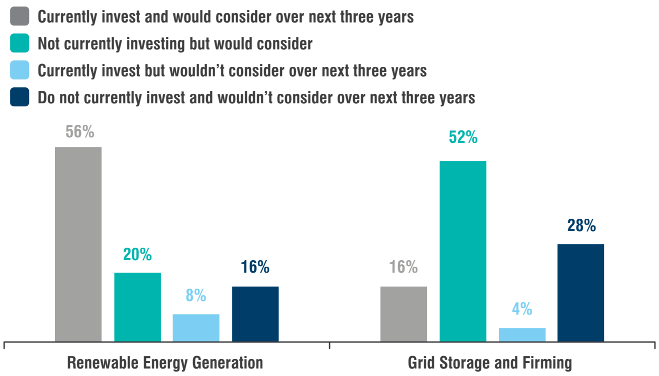


Figure 32: Investor appetite for renewable energy assets: generation and storage



Note: This data is drawn from Infrastructure Partnerships Australia's analysis of survey results.

Emerging Market Conditions

Figure 33: To what extent do you agree or disagree that maintaining a social licence to operate has become more important when managing or making investments

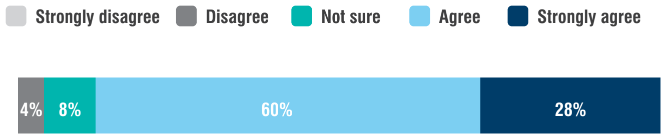


Figure 34: To what extent are the current national ESG rating tools adequate for measuring the sustainability of greenfield infrastructure projects?

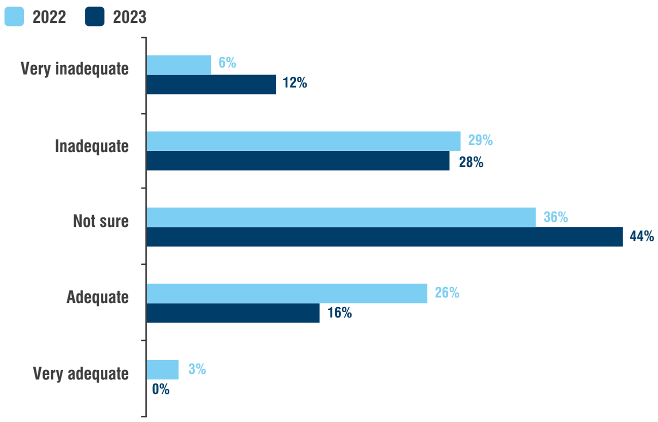
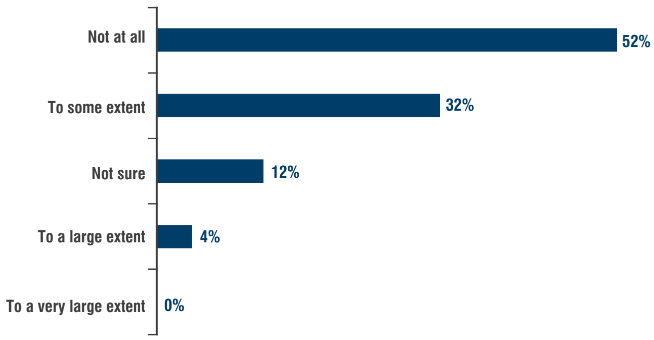


Figure 35: To what extent has high inflation levels impacted your willingness to invest in Australian infrastructure?



State vs State

Figure 36: What Australian states do you have a preference for investing in?

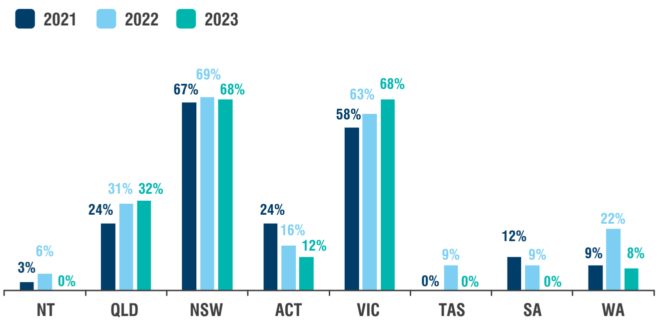
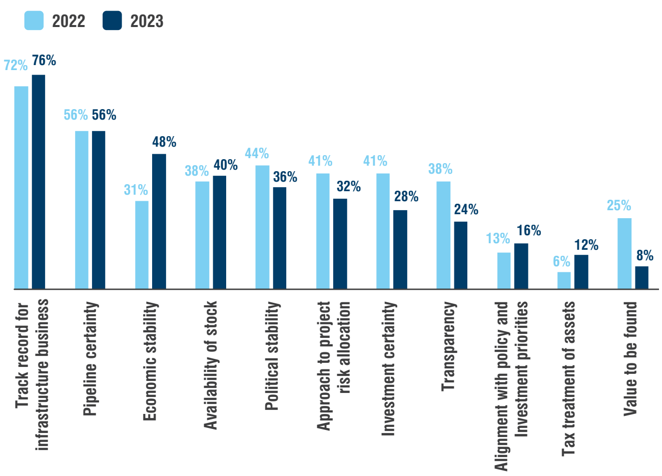


Figure 37: What factors make particular states more attractive?



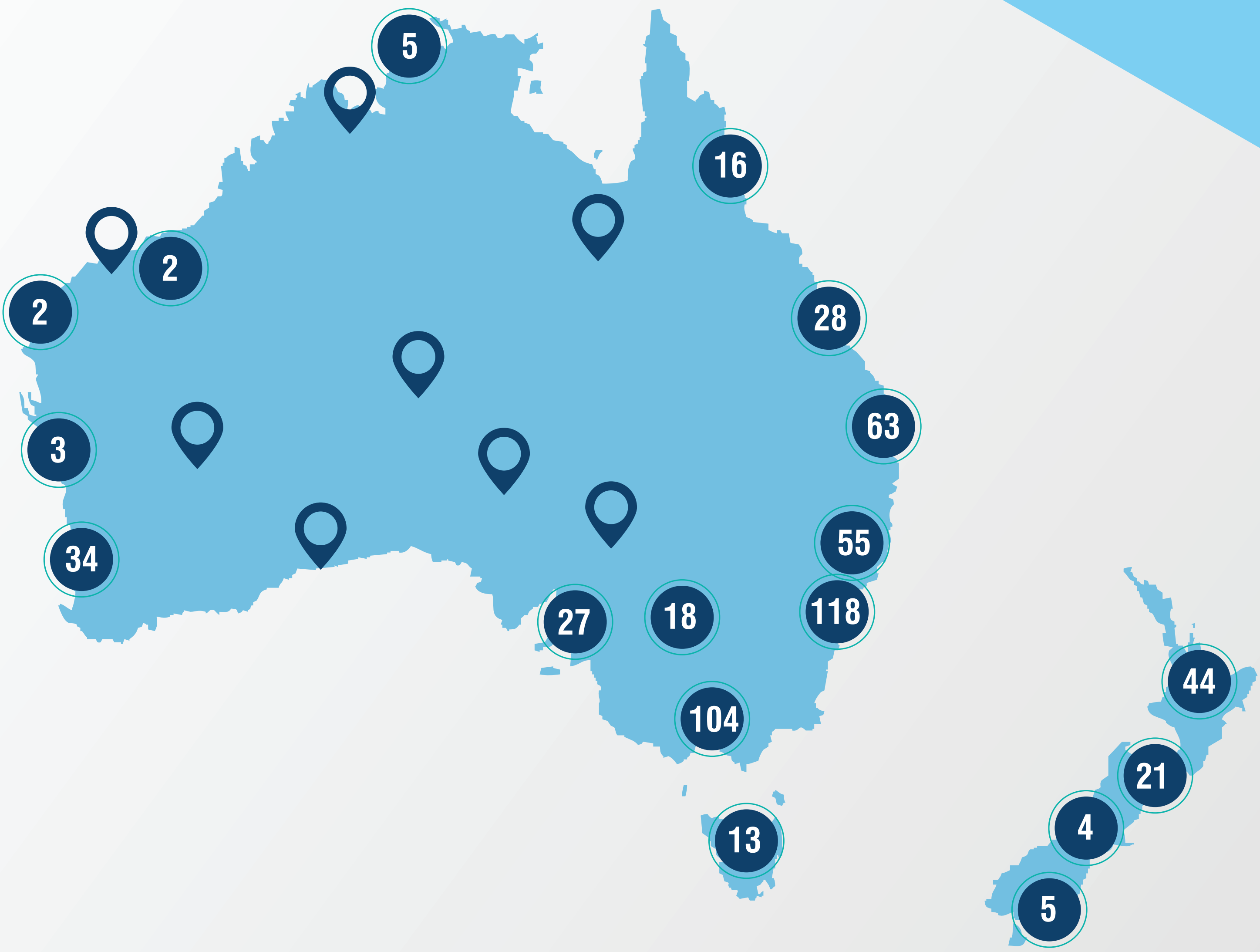
ANZIP AUSTRALIA & NEW ZEALAND INFRASTRUCTURE PIPELINE

INFRASTRUCTURE PARTNERSHIPS AUSTRALIA

For more information on the projects mentioned in this report please visit infrastructurepipeline.org

The Australia & New Zealand Infrastructure Pipeline (infrastructurepipeline.org) provides a detailed and informed picture of upcoming greenfield and brownfield infrastructure investment and major construction opportunities, across the two countries.

infrastructurepipeline.org allows you to search for project information, chart market trends and register for updates.



INFRASTRUCTURE PARTNERSHIPS AUSTRALIA

Allens > < Linklaters

Infrastructure Partnerships Australia
Suite 3.03, Level 3, 95 Pitt Street
Sydney NSW 2000
PO Box R 1771
Royal Exchange NSW 1225
www.infrastructure.org.au

Allens Linklaters
Level 28
Deutsche Bank Place
126 Phillip Street
Sydney NSW 2000
www.allens.com.au