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Navigating Net Zero

Business Survey

August 2023

NAB Markets Research

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Navigating Net Zero Survey Introduction

Australia’s 2030 Nationally Determined Contribution (NDC) to reduce Greenhouse Gas (GHG) emissions to 43% below 2005 levels by 2030 requires an acceleration of efforts to date by Australian corporates to reduce their emissions.

Increasing renewable energy adoption remains a popular option from our latest survey of Australian businesses¹, but the 2030 NDC is equivalent to closing Australia’s remaining black coal generation industry, and in our view, projected population growth increases the challenge.

On this basis we believe broader engagement from Australian corporates is required to meet the 2030 target. Our “Navigating Net Zero - Business Survey¹” highlights that while progress is being made, nearly 74% of respondents are yet to develop a ‘Net Zero by 2050’ strategy.



26% of respondents have or are developing a strategy to achieve net zero GHG emissions by 2050, up from 9% in 2021.

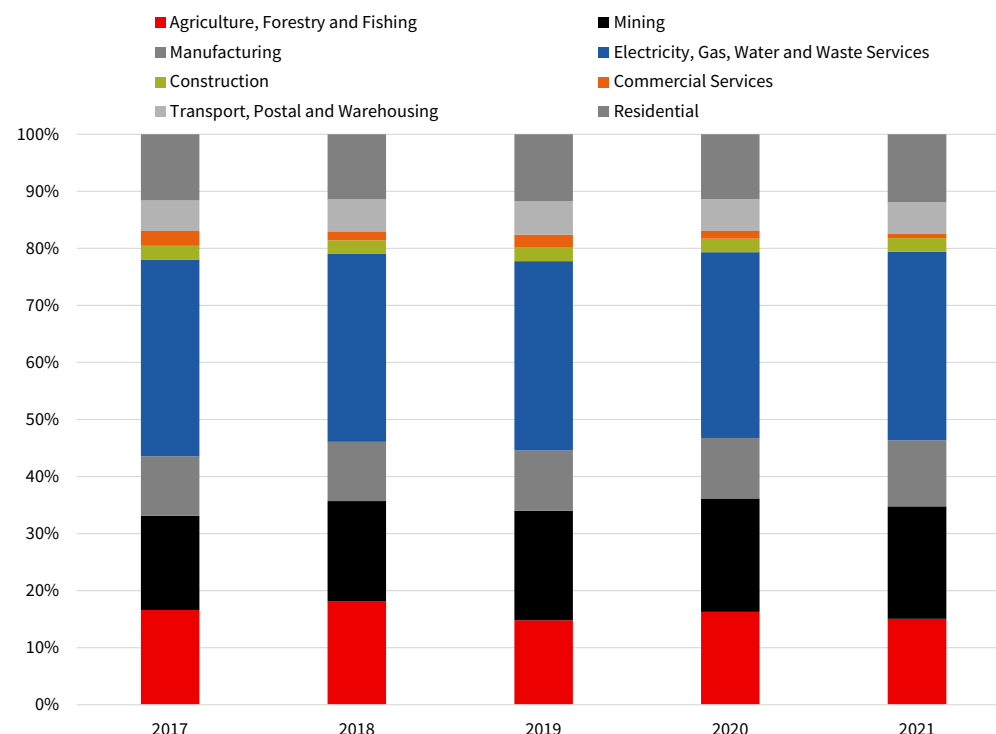
43% of respondents see renewable energy uptake as their key strategy to lower emissions while **20%** flag they are still not making any effort to reduce their GHG emissions profile.



~43% of Australia’s emissions come from industry excluding Mining & Electricity. Of these sectors **~72%** on average do not have a net zero strategy.

1. 2023 is the inaugural Navigating Net Zero Survey, and follows on from the former NAB Renewables survey which was conducted from late 2018 to 2022. The new survey name reflects new questions to capture Australian corporates progress on reducing GHG emissions, through a variety of strategies, including but not limited to, increased renewable energy adoption. The survey data was collected in June this year as part of NAB’s regular Quarterly Business Survey, which samples a broad group of business who may or may not be NAB customers. This survey covers 850-900 firms across the non-farm business sector ranging from small (35-99 employees), medium (100-199 employees) to large companies (200 plus employees).

Chart 1: Australia’s diverse source of emissions



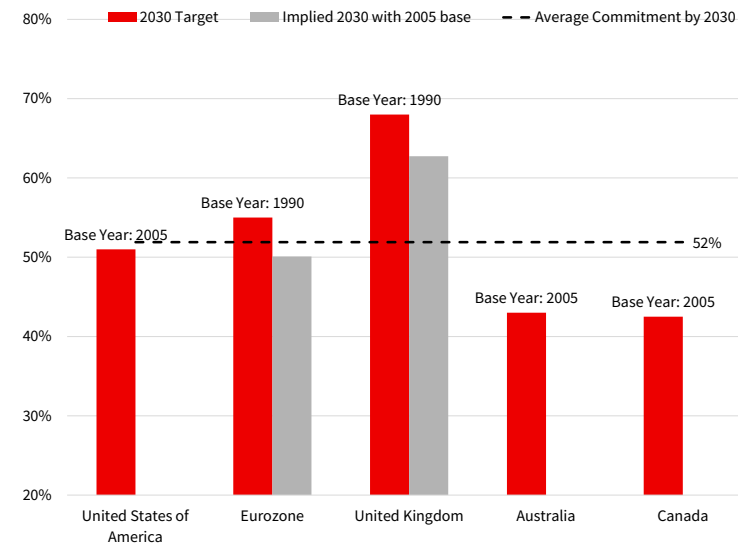
Source: DCCEEW, National Australia Bank

Navigating Net Zero Survey accelerating climate targets

- The first ever Global Stocktake, to assess global progress towards the Paris Climate Change Agreement concludes at the UN Climate Change Conference (CoP28) this November, and in our view has the potential to be a catalyst for further acceleration of global climate action.
- With OECD peers continuing to progress with increasingly ambitious 2030 NDCs, we see a risk of increasing international pressure on Australia to ratchet up its NDC post CoP28 in November.
- Australia updated its NDC to the UNFCCC in June 2022 to a 43% reduction in GHG emissions by 2030 (vs 2005). This compares to the previous target of a 26-28% reduction over the same time period.
- Australia’s state-based climate targets already imply ~50% emissions reductions by 2030, which is more consistent with European NDCs.
- Australia’s existing climate contributions are aligned with the 2015 Paris Agreement, limiting global warming to well below 2 degrees, however the aspirational target to limit global warming to 1.5 degrees would require a further acceleration of GHG emission reduction.

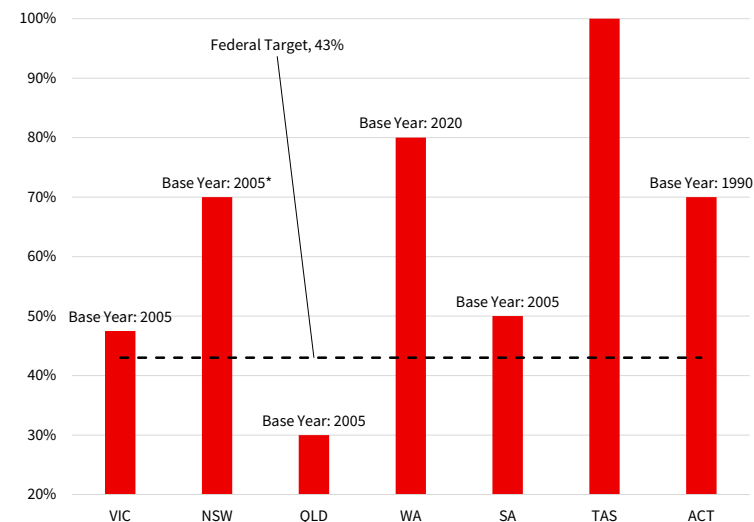
The Navigating Net Zero – Business Survey highlights engagement on Australia’s Net Zero 2030 and 2050 contributions from sectors excluding the electricity and mining sectors likely faces increased regulatory/policy focus in order to support Australia’s accelerating climate goals.

Chart 2: Australia vs OECD Peer NDCs



Source: Various government websites, National Australia Bank

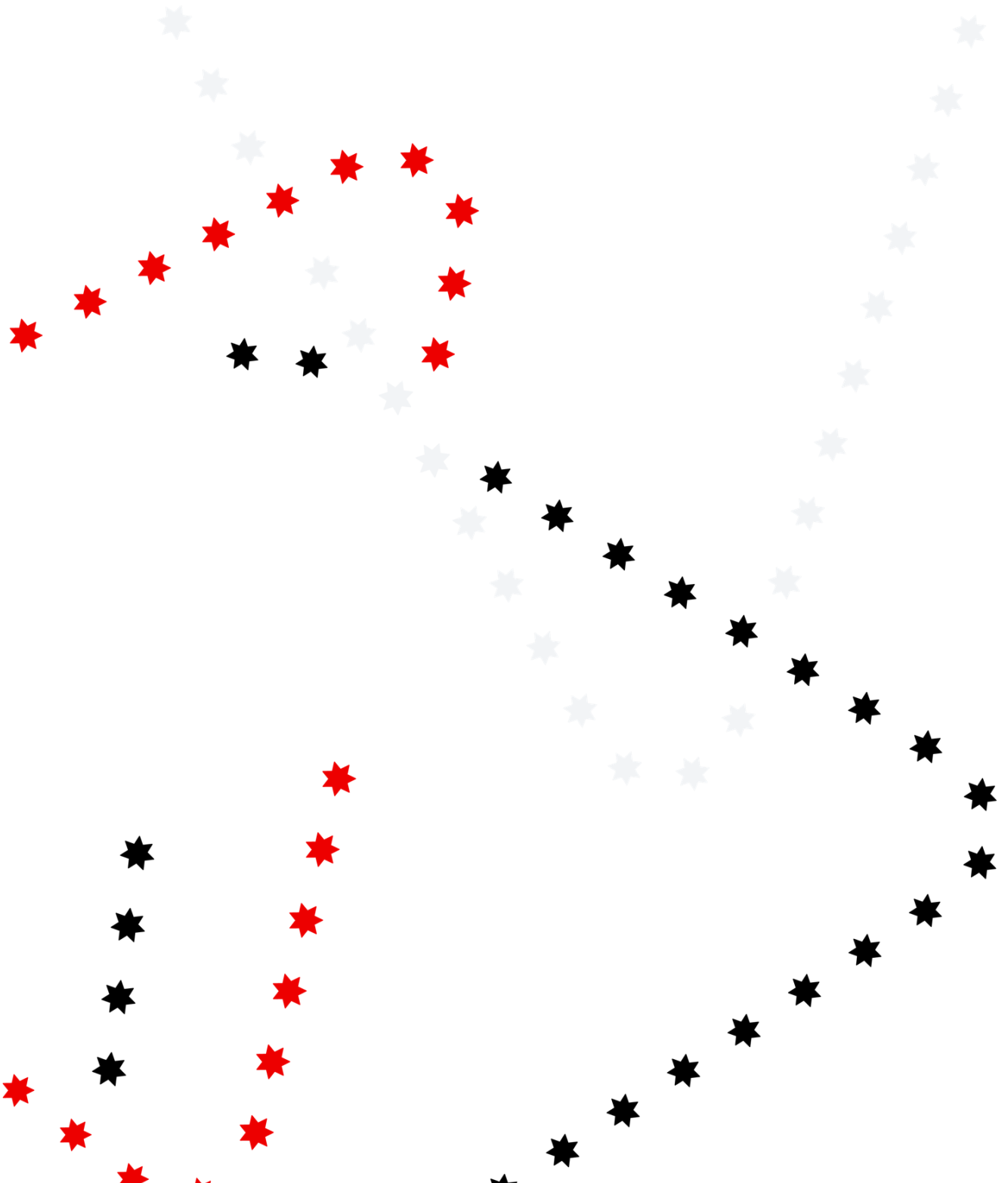
Chart 3: Australian State 2030 GHG Emission reduction targets



Source: Various government websites, National Australia Bank

**Australia's GHG
reduction
challenge is
growing**

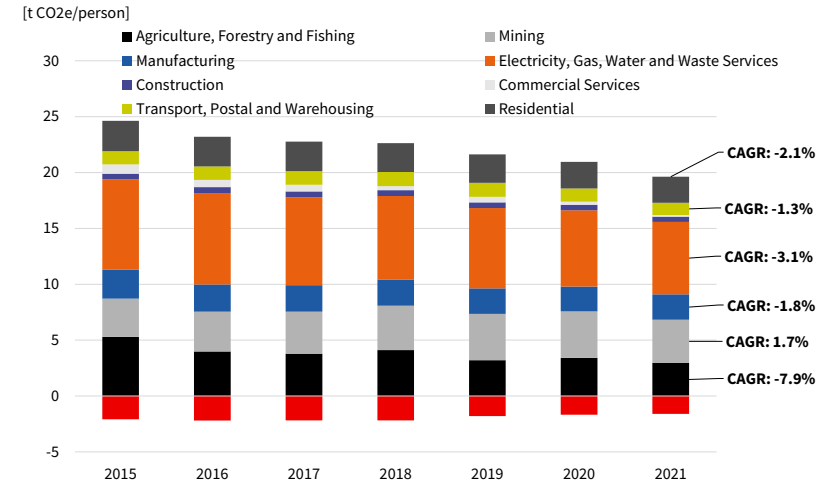
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Australia's Progress GHG emission reduction needs to accelerate

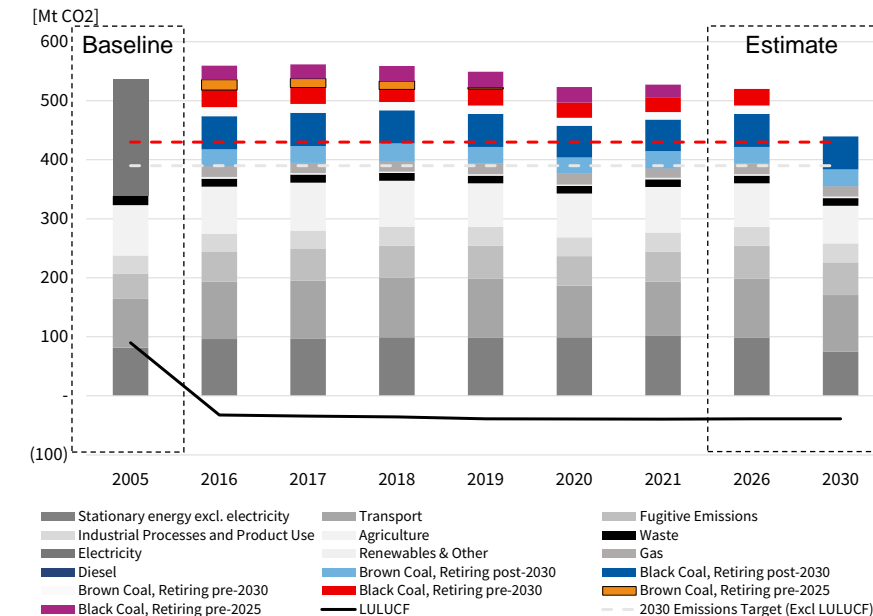
- Australia's rate of decarbonisation since 2015 and the signing of the Paris Agreement is equivalent to ~13mt CO2e per annum or equivalent to ~200MW of black thermal coal generation per annum.
- Australia's current NDC requires a GHG emission reduction of ~30-40mt per annum to 2030 (from 2005 levels), or the equivalent of ~45% of the emissions reported from black coal generation in 2019.
- From 2019 to 2021 Australia's population growth slowed to ~0.3% due to the impact of the pandemic which also saw a slowdown in emissions. However, population numbers have begun to rebound and we expect population growth to 2030 adds to Australia's GHG emission reduction challenge.
- A 50-55% reduction in emissions by 2030 would be more in line with UK and European NDCs, but still leaves Australia's 2030 per capita emissions significantly elevated vs OECD peers.
- A 50-55% reduction in Australian emissions is equivalent to closure of all black & brown coal generation by 2030, with any shortfalls met with emission reduction from other sectors or carbon offsets.

Chart 4: Rate of progress of Australian emissions reductions from 2015 to 2021 (per capita)



Source: DCCEEW, National Australia Bank

Chart 5: Australian emission reduction estimate by 2030



Source: Source: Australian Department of Industry, Science, Energy and Resources, AER, CER, AEMO, Australian Climate Change Authority, Reputex Energy, and the National Australia Bank

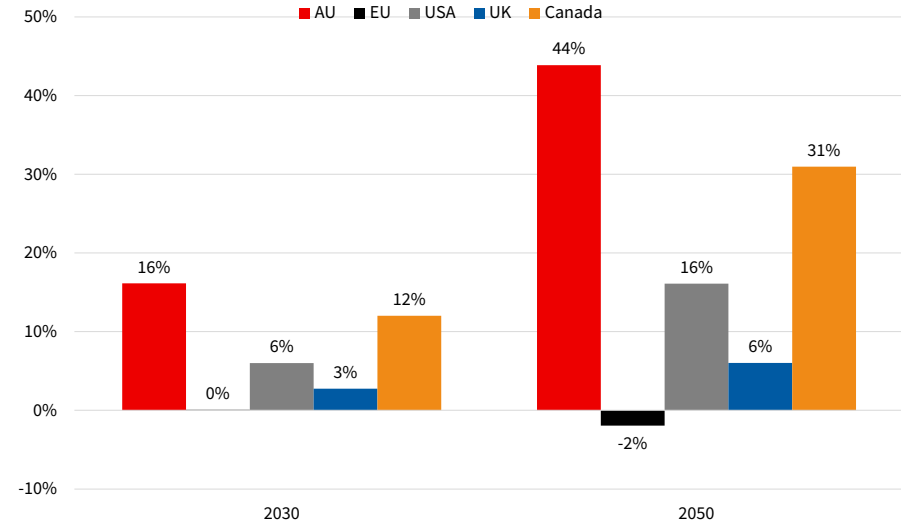
Australia's Progress Population growth to 2030 adds to Australia's climate challenge

- Australia's population growth to 2030 and 2050 is projected to increase by 1.2%-1.5% cagr according to the [Australian Bureau of Statistics](#) (linked).
- OECD peers - Europe, UK, USA and Canada - have lower population growth expectations to 2030, and 2050.
- By 2050 Australian CO2e emissions would increase by 44% due to expected population growth (ABS medium case) based on 2021 per capita emission levels, which is compared to 31%, 16% 6% and -2% for Canada, USA, UK and Europe respectively.
- Updating projected emission levels in Australia for the expected population growth to 2030 and 2050 implies Australia may fall short of its current NDC unless a 100% reduction in emissions from electricity generation is achieved as well as increased emission reductions from other sectors.
- The projections in Chart 7 assume a constant per capita GHG emissions intensity excluding electricity and mining which are assumed to decarbonise by 2050.

Population CAGR from 2021	2030	2050
AU	1.51%	1.22%
EU	0.01%	-0.07%
USA	0.58%	0.50%
UK	0.27%	0.19%
Canada	1.14%	0.90%

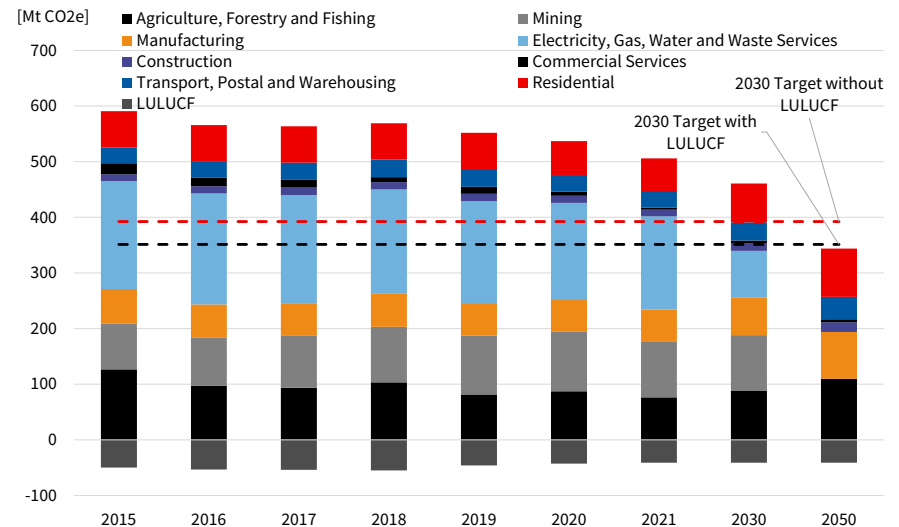
Source: Various government websites, National Australia Bank

Chart 6: Additional emissions due to population projections as a percentage of 2021 emission levels



Source: Various government websites, National Australia Bank

Chart 7: Australia's projected emissions to 2050, constant CO2e per capita intensity excluding electricity/mining

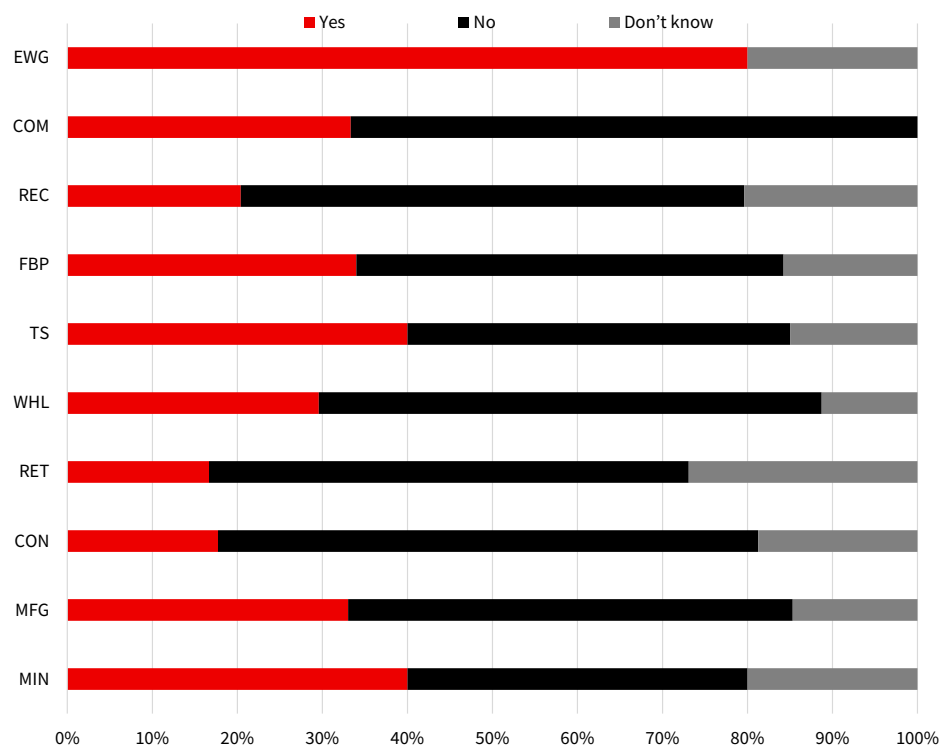


Source: DCCEEW, National Australia Bank

Australia's Progress Broader engagement on climate action is needed in Australia

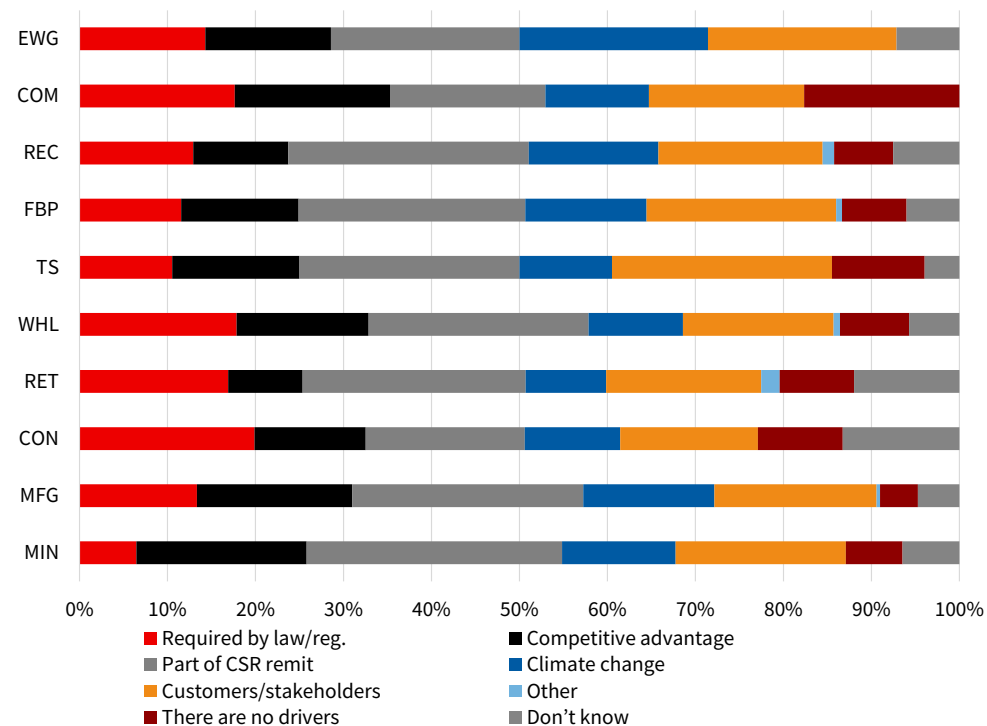
- More than 80% of the ASX-listed S&P 200 companies have adopted a net zero strategy across all industries
- However, the Navigating Net Zero Business Survey highlights that the electricity sector is the most advanced in development of net zero strategies.
- Of the broader survey group (excluding electricity), on average, only 34% have begun to develop a net zero strategy. We believe this needs to accelerate if Australia is to meet and/or accelerate its 2030 climate contributions.
- In a positive signal 15-20% of respondents acknowledged that Customer/Stakeholder expectations are a key driver of climate strategy versus an average 10% focussed on legal obligations.

Chart 8: Which industry has started net zero targets?



Source: Navigating Net Zero Business Survey

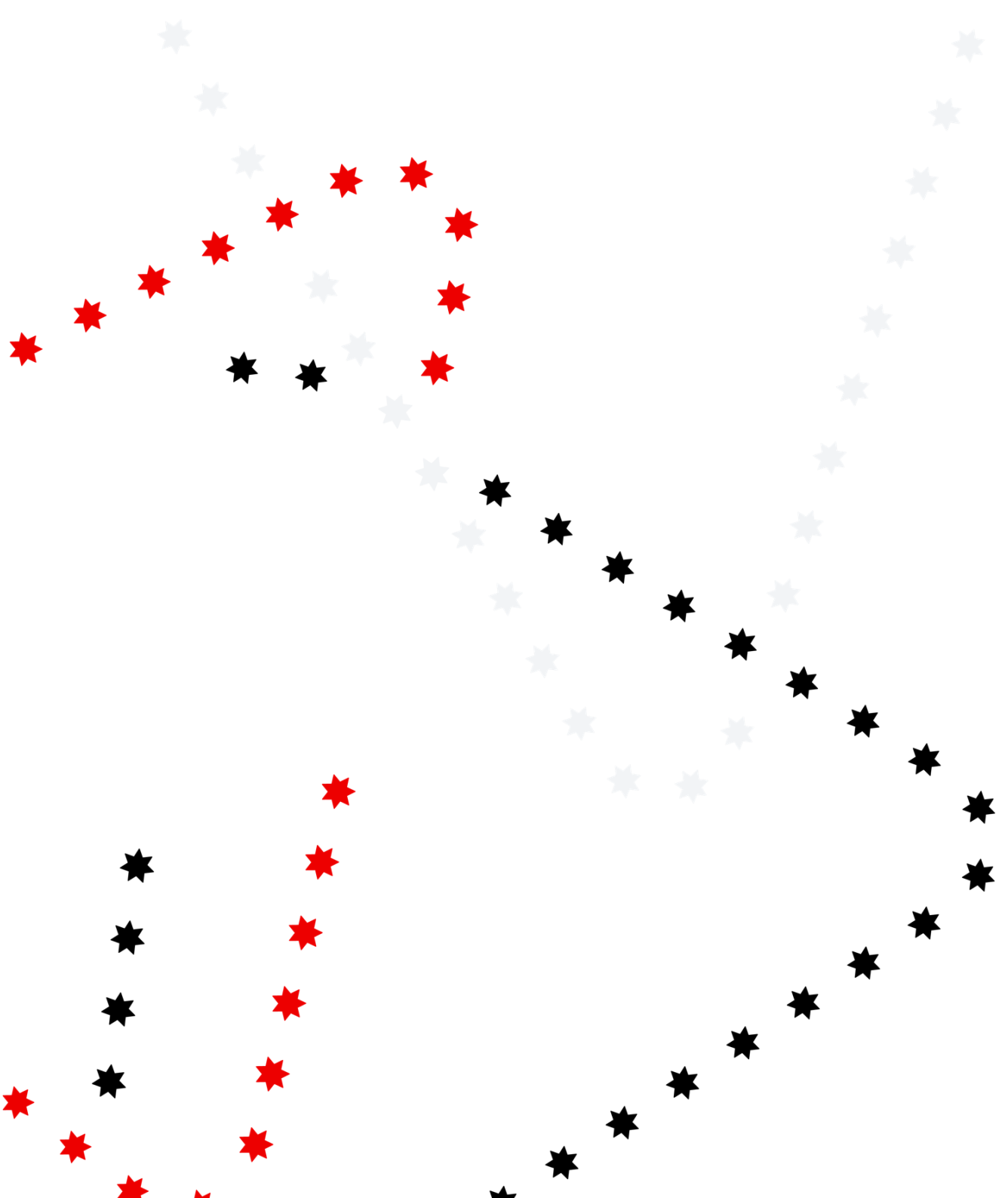
Chart 9: What are the drivers of industries uptake of a net zero target?



Source: Navigating Net Zero Business Survey

Australia's transition faces rising costs and delays

2

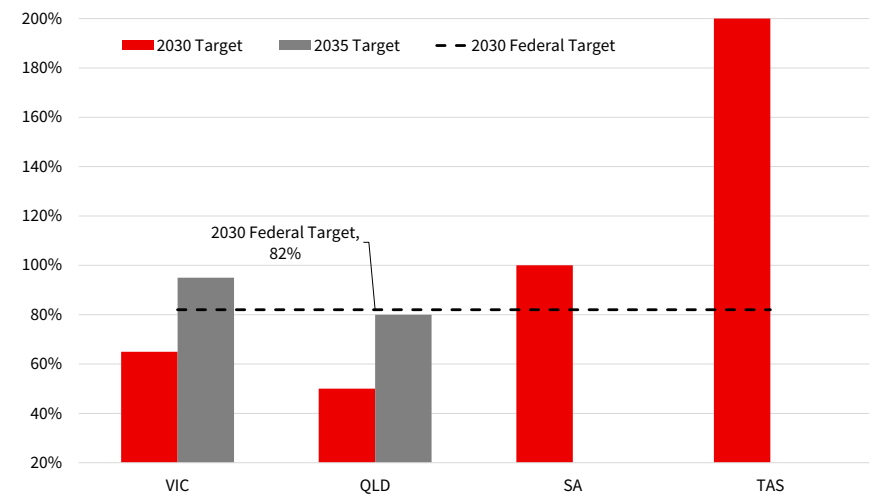


Australia's Progress Electricity emissions falling



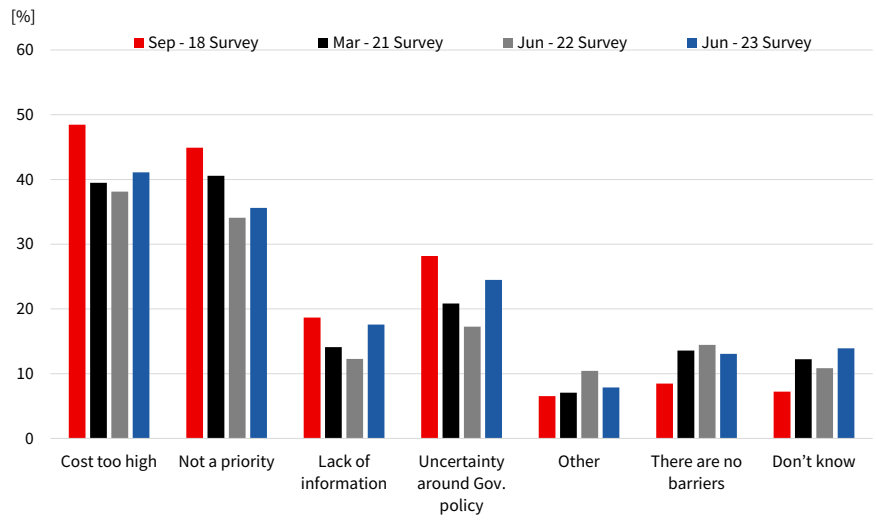
- Renewable energy adoption remains a key element in corporate net zero strategies – see Chart 14.
- Rising renewable costs are flagged by respondents as a key barrier to increased renewable adoption.
- We expect this may shift over time given that we expect elevated coal and gas prices through 2H23 and 2024 will improve the cost competitiveness of renewables vs fossil fuel sources.
- Furthermore state based renewable energy targets are expected to continue to drive greater uptake of renewable energy.

Chart 10: Renewable Energy – State by State targets vs Federal Targets



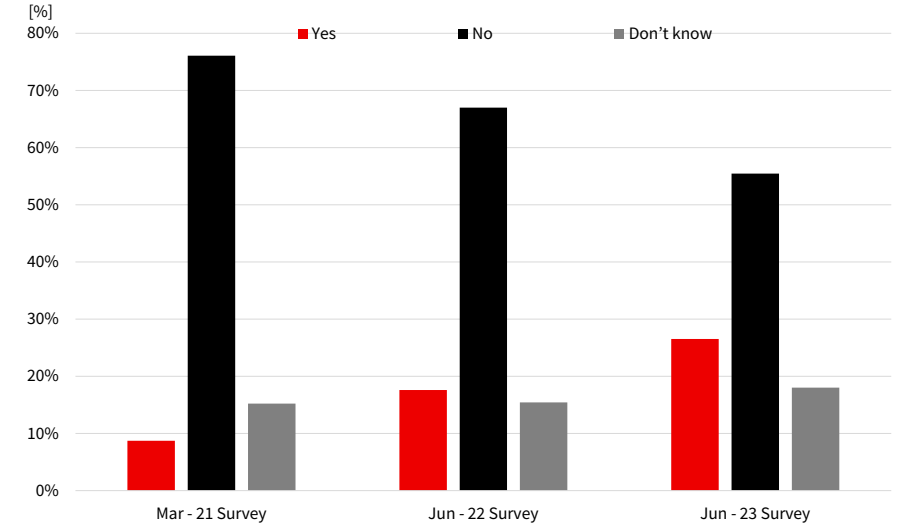
Source: Various government websites, National Australia Bank

Chart 11: What are the barriers to your organisation using more renewable energy?



Source: Navigating Net Zero Business Survey

Chart 12: Does your organisation have, or is it developing, a plan to achieve net zero GHG emissions by 2050 or sooner (net zero transition plan)?

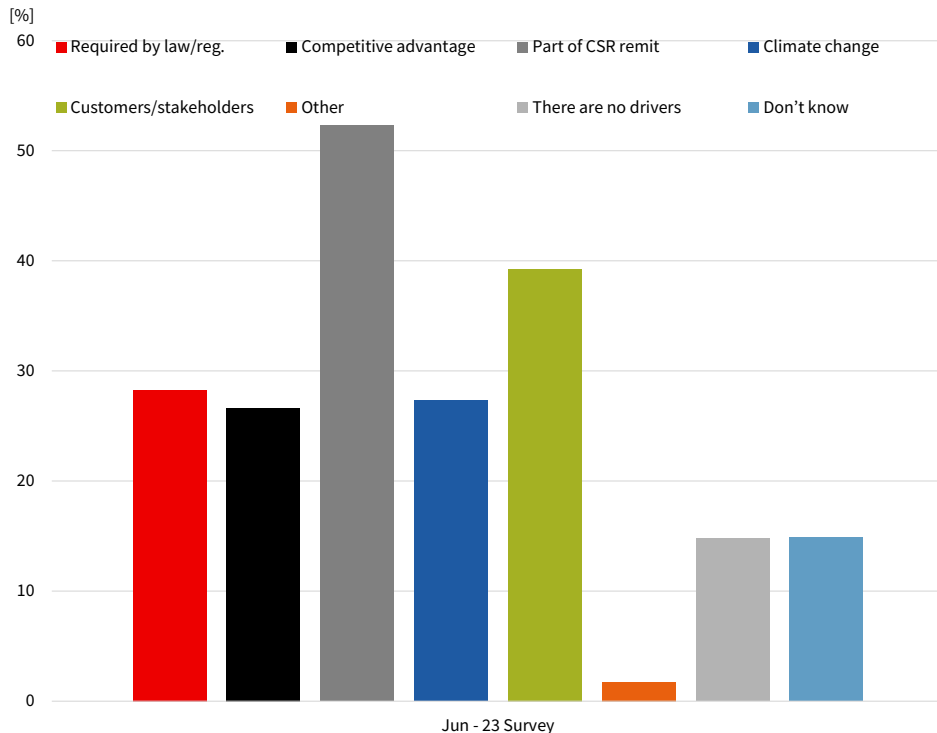


Source: Navigating Net Zero Business Survey

Costs Navigating Net Zero Survey

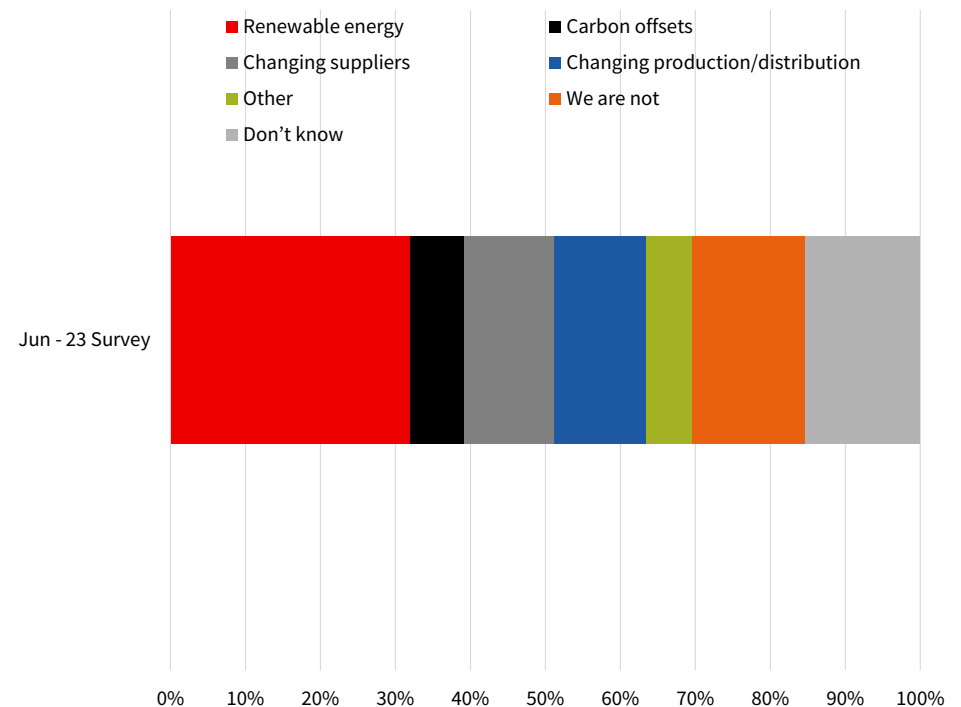
- ~27% of respondents have adopted a net zero strategy, which we expect to grow in coming years as Australian corporates position for:
 - lower GHG emissions as a competitive advantage (~26% of respondents focused on this)
 - customer expectations as a driver to lower GHG emissions (~40% of respondents focused on this)
 - changing suppliers and or changing production/distribution methods to lower GHG emissions (~16% of respondent focused on this)
- The survey consistently highlighted that increased renewable energy was a preferred strategy for respondents to lower their GHG emissions profile.

Chart 13: What are the key drivers, if any, for your organisation to reduce your carbon footprint?



Source: Navigating Net Zero Business Survey

Chart 14: What strategies, if any, is the organisation currently using to reduce your carbon footprint?



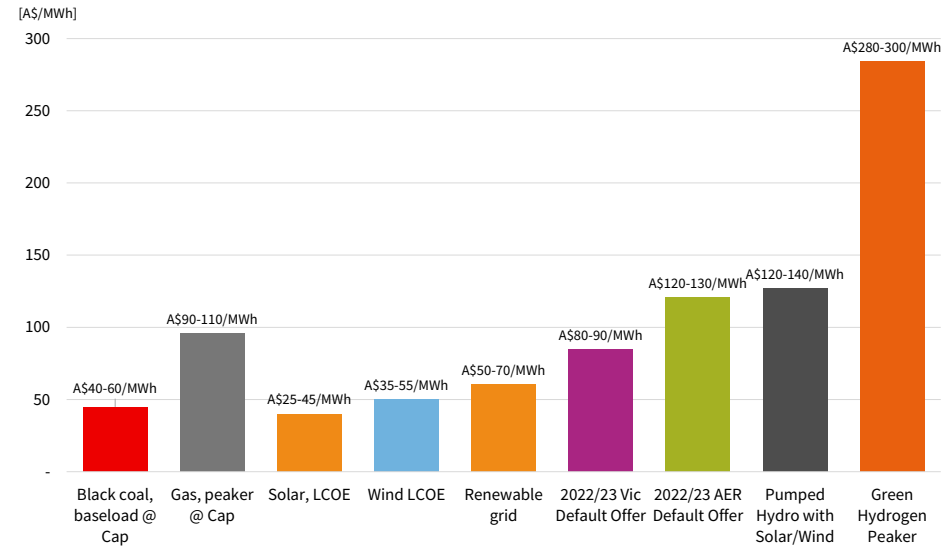
Source: Navigating Net Zero Business Survey

Australia's Progress Electricity emissions falling

- Achieving a net zero electricity grid by 2030-2035 is central to Australia's decarbonisation goals on our numbers – see Chart 5.
- Renewable energy firmed with grid-scale battery or pumped hydro is increasingly cost competitive versus current domestic spot coal and gas prices. As highlighted in Chart 15.
- Renewable energy firmed with battery or pumped hydro is also expected to offer Australian industry a lower volatility cost of energy option.
- Furthermore, a potential rebound in National Electricity Market (NEM) summer peak demand this year will drive increased risk of black-outs for the grid – which we expect to stimulate further investment in energy infrastructure to support improved reliability and accelerate the transition.
- Green Hydrogen prices continue to look uncompetitive on our numbers, and we expect a subsidy comparable to the US Inflation Reduction Act of ~US\$3/kg is likely required to close the gap on current projected renewable technology costs in 2030.

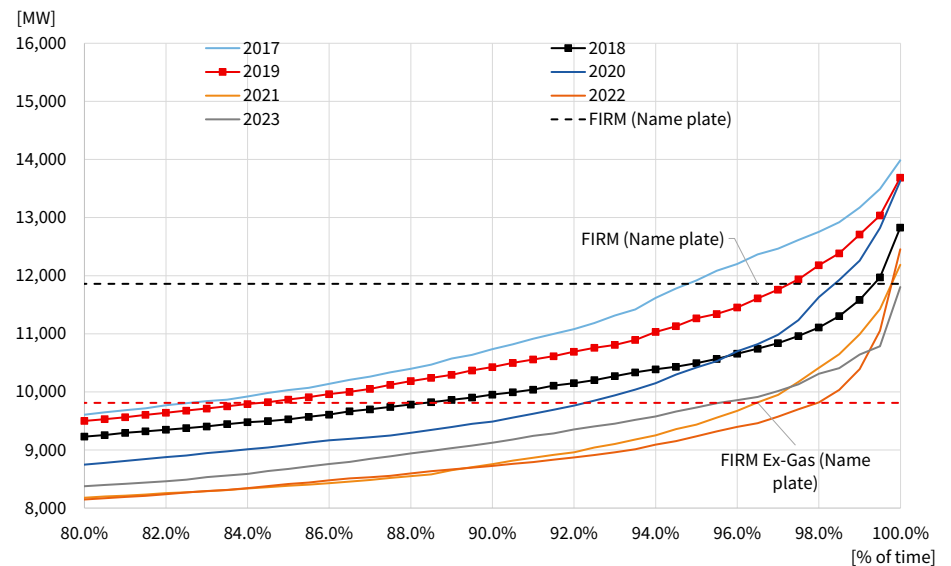
¹Short-run marginal cost, SRMC as outlined in Chart 15, is largely driven by fuel costs for thermal generation plant

Chart 15: SRMC¹ of generation of existing assets vs levelized cost of energy from new renewables scenarios



Source: Source: Australian Department of Industry, Science, Energy and Resources, AER, CER, AEMO, Australian Climate Change Authority, Reputex Energy, and the National Australia Bank

Chart 16: NSW peak demand rebound vs firm capacity



Source: AEMO, National Australia Bank

Carbon offsets

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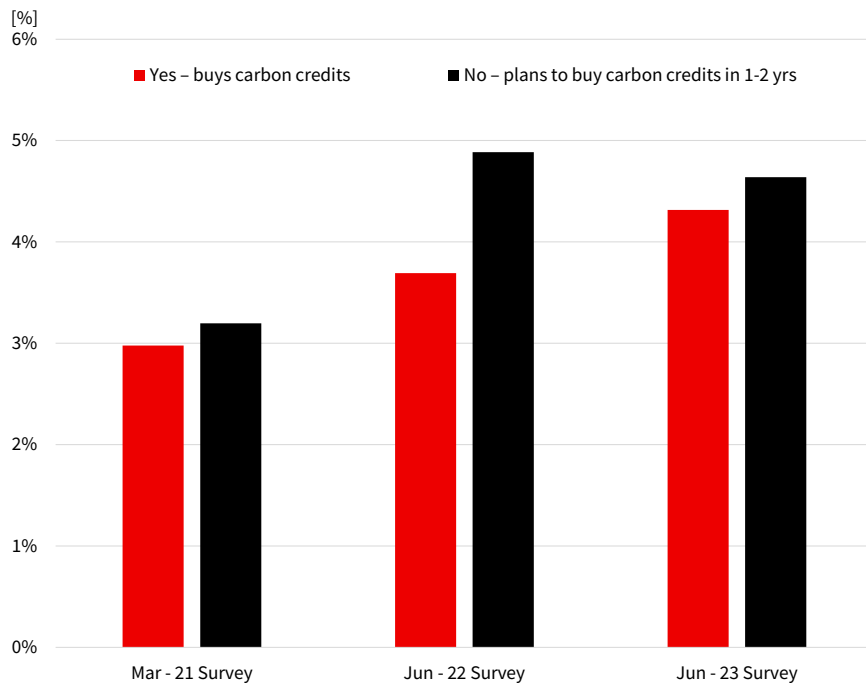


Carbon offsets to meet net zero goals

The carbon offset market appears critical to meeting and beating Australia’s emission reduction goals.

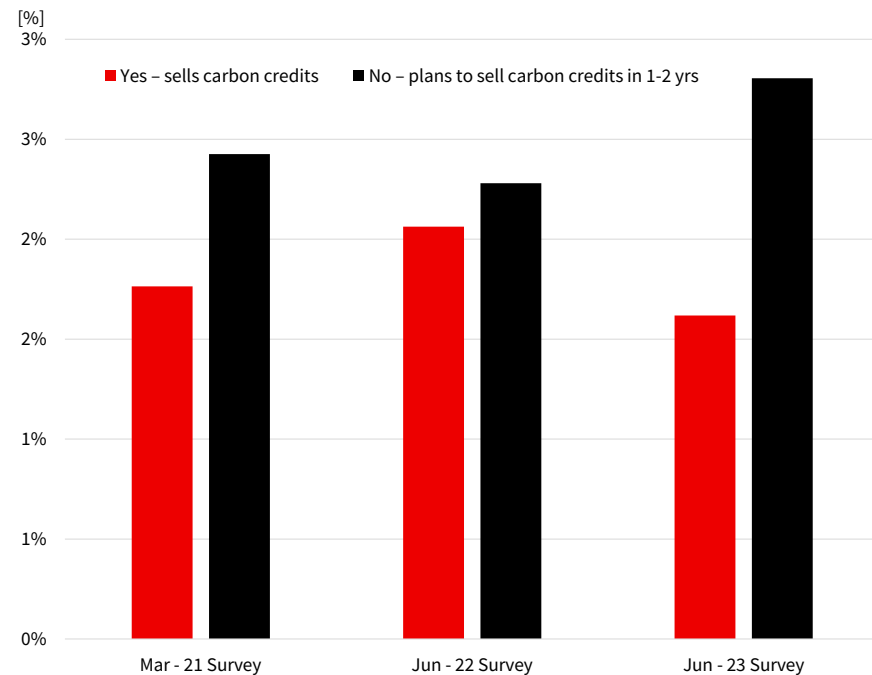
- Formal plans to meet individual net zero targets are likely to become an increasing focus for policy makers and consumers and will have an impact on survey respondents and their Australian peers.
- Australian carbon credit units (ACCUs) are increasingly positioned as a flexible solution for Australian corporates to meet near term emissions targets and resolve any potential shortfalls in Safeguard Mechanism Credits.
- In line with the ASX50 companies, survey respondents are likely to increasingly leverage the carbon offset market in Australia to meet their GHG emission reduction goals.
- The [Independent Review of the ACCU market](#) (linked) found that the market was ‘essentially sound’ and represented legitimate GHG emissions reductions.
- Use of carbon credits rose to ~4.3% in June 2023 from ~3% in the March-21 survey. The number of respondents selling carbon credits has fallen, but we note the agriculture sector was not covered in the survey.

Chart 17: Does your organisation buy carbon credits?



Source: Navigating Net Zero Business Survey

Chart 18: Does your company sell carbon credits?



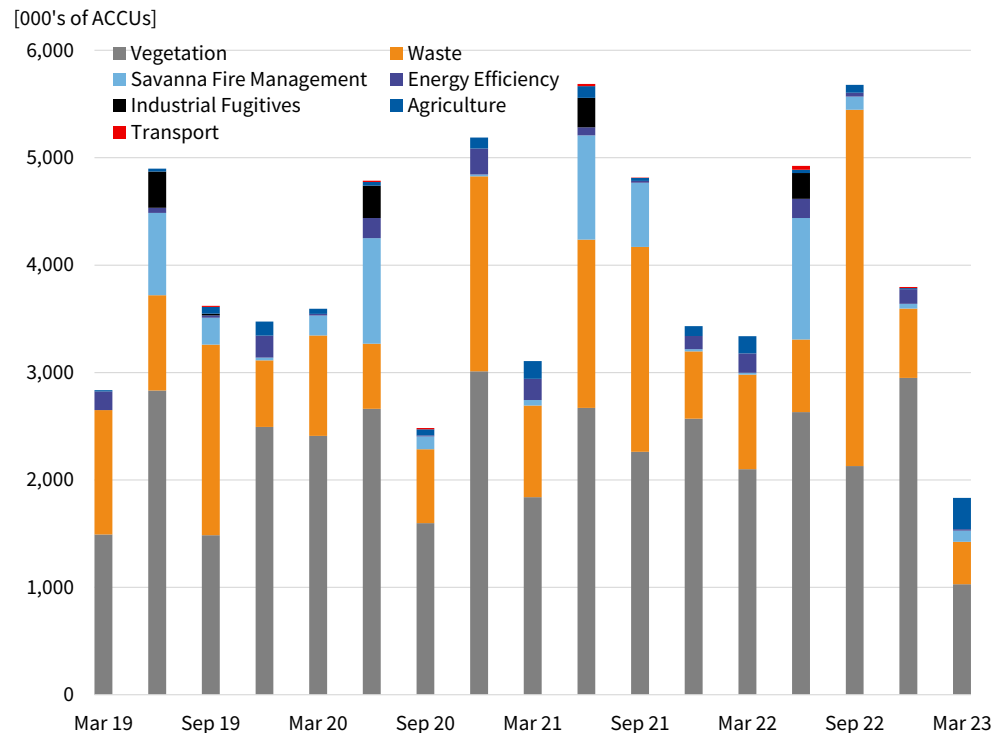
Source: Navigating Net Zero Business Survey

Carbon offsets Increased investment

Increased investment is required to support the Australian offset market

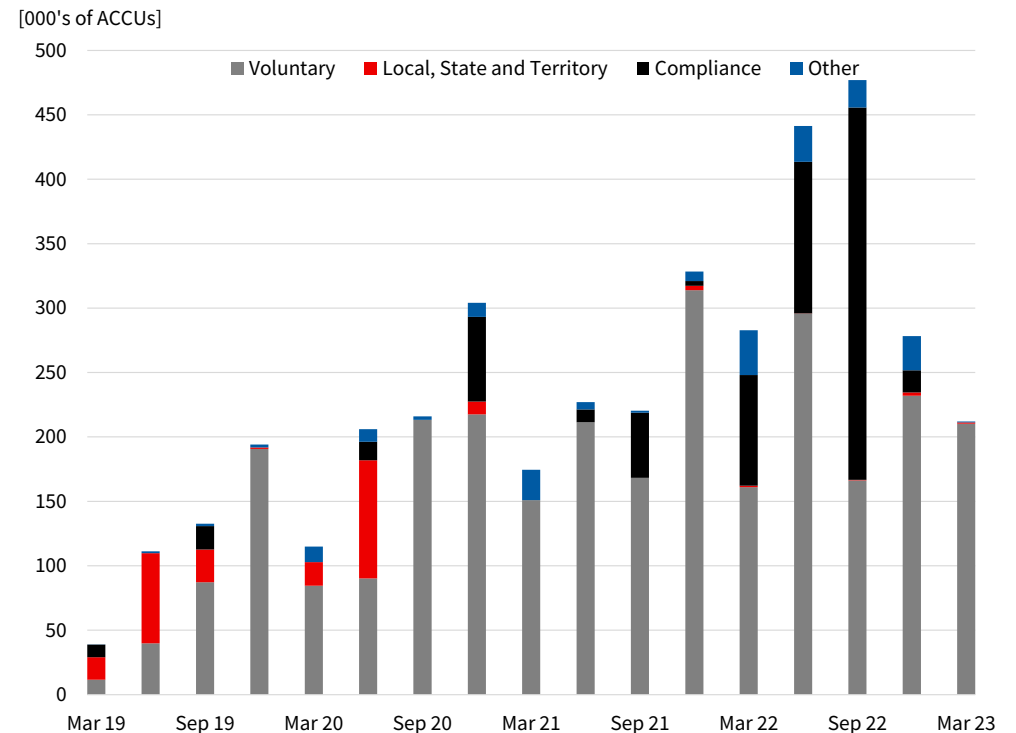
- The [Powering Australia](#) (linked) modelling undertaken by Reputex Energy highlights the potential for the ACCU market to account for as much as 40Mt of GHG emission reductions by 2030. The rising demand for ACCUs is expected to be driven by the growing number of Australian corporates setting GHG emission reduction targets by 2025 and 2030. Safeguard Mechanism covered entities are also expected to be net buyers of ACCUs in order to meet their emission goals.
- While the Australian Government’s Emission Reduction Fund is expected to cease buying ACCUs, making room for increased demand, overall we expect market conditions to tighten.
- Chart 20 highlights the development of the ACCU market under the ERF and its relative scale to the potential 40Mt size considered for 2030.

Chart 19: ACCU Production by type



Source: CER, National Australia Bank

Chart 20: ACCU surrender by demand source



Source: CER, National Australia Bank

Navigating Net Zero Survey - in detail

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Overview

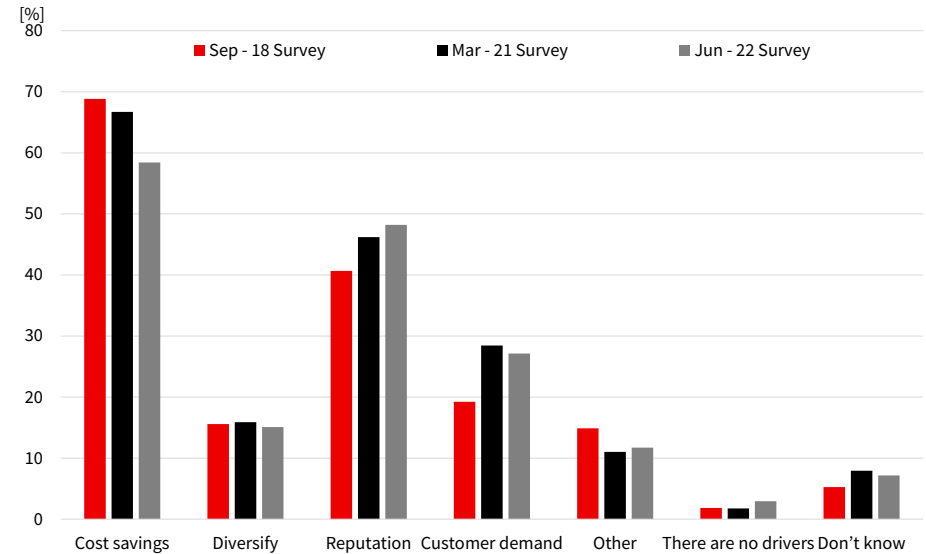
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Survey Findings Overall Data

Renewable energy and Net Zero policies

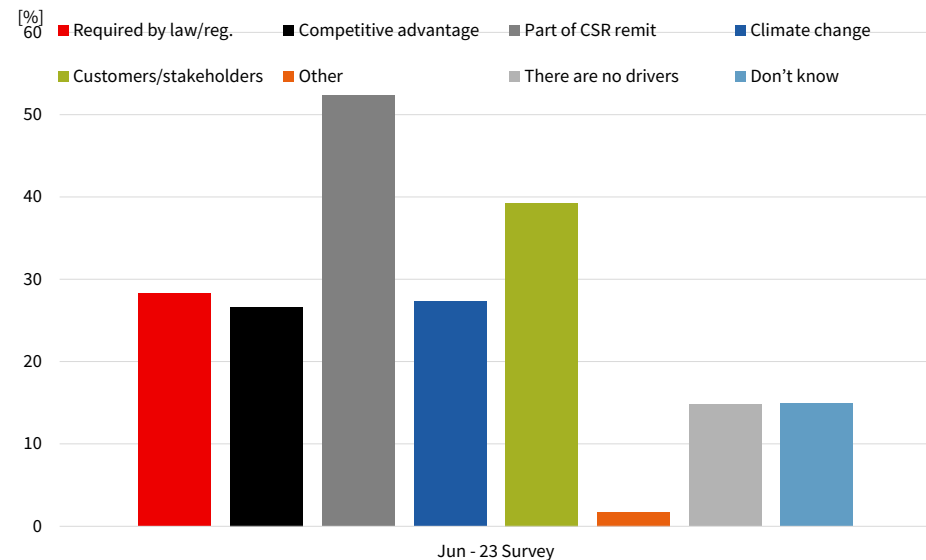
- The NAB Renewables Survey from 2018 to 2022 showed a growing cohort of Australian corporates developing renewable energy policies to lower their GHG emissions profile. This year the Navigating Net Zero Survey shows ~34% of respondents are now developing or have in place a strategy to achieve net zero emissions by 2050.
- Nearly ~40% of survey respondents identified customer/stakeholder demand this year as a driver of reducing GHG emissions which we see as a growing cohort vs the 2022 NAB Renewables Survey, which only identified ~27% of respondents who identified customer expectations as a driver of increased renewable energy adoption.
- Survey respondents though are less advanced in developing overall strategies to achieve net zero emissions in line with the 2015 Paris Agreement objectives versus simpler renewable energy adoption.
 - In 2022 less than 3% of respondents saw no drivers to adopting renewables, and only 7% were unsure of the drivers for adopting renewable energy.
 - In 2023 15% of respondents saw no drivers to reducing their GHG emissions profile with a similar amount unsure of any drivers to act.
- While the electricity and mining sectors are most engaged in reducing Australia’s GHG emissions profile, the electricity sector accounts for ~35% of national emissions. Accordingly a broader effort from Australian corporates across all industries is required to meet our current NDC of 43% emissions reduction by 2030.

Chart 21: What are the key drivers for using renewable energy?



Source: Navigating Net Zero Business Survey

Chart 22: What are the key drivers, if any, for your organisation to reduce your carbon footprint?



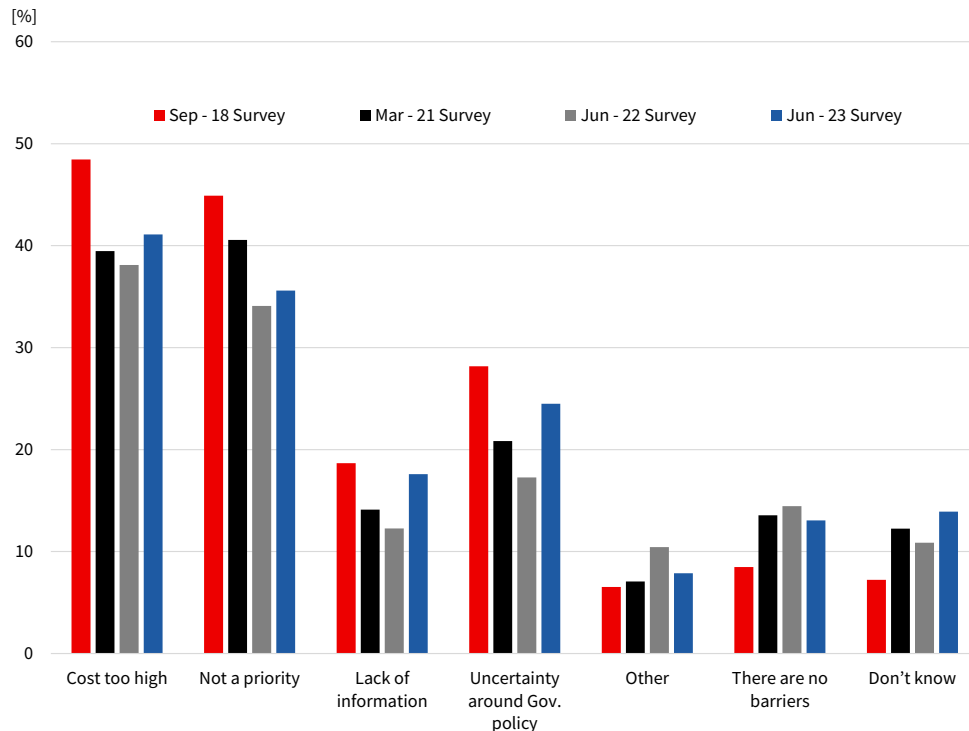
Source: Navigating Net Zero Business Survey

Survey Findings Overall Data

- The survey highlights information gaps and government policy risks as barriers to meeting net zero goals and adopting renewable energy.
- The government’s ‘Climate Active’ Initiative will play an increasingly important role in supporting businesses reach net zero GHG emissions.
- On the path to 2030 the broadening focus on climate action is likely to drive greater understanding of government policy and higher sophistication of sustainability strategies.

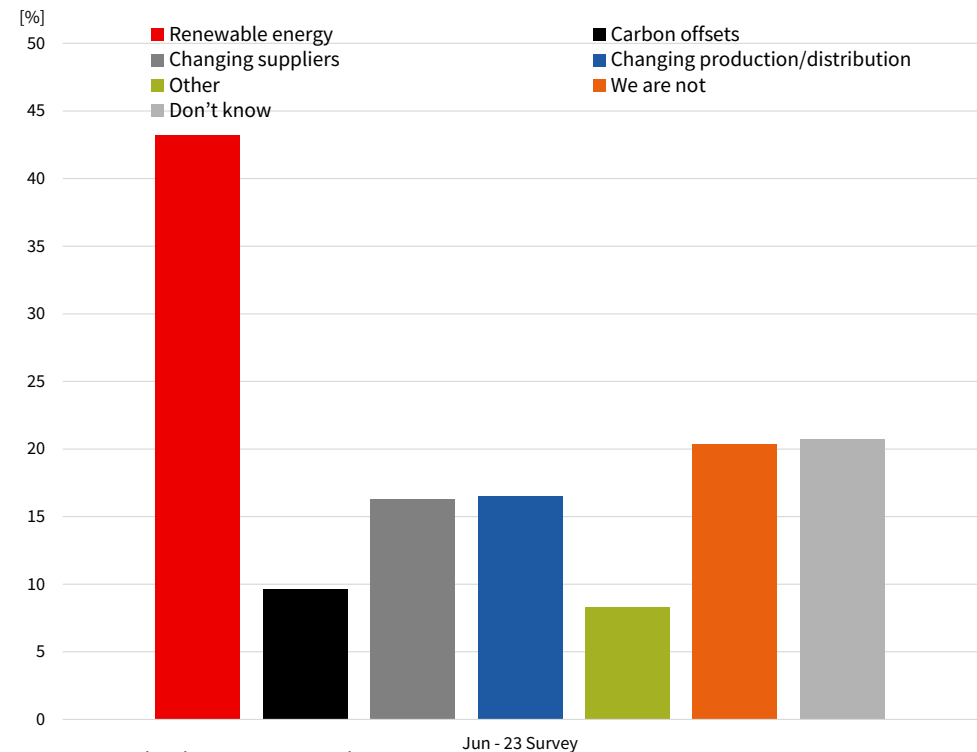
The Navigating Net Zero – Business Survey shows only ~10% of respondents are currently purchasing carbon offsets. As Australia accelerates its GHG emission reduction efforts by more than 3x vs current run rate to 2030, we expect carbon offsets to be a critical tool.

Chart 23: What are the barriers to your organisation using more renewable energy?



Source: Navigating Net Zero Business Survey

Chart 24: What strategies, if any, is the organisation currently using to reduce your carbon footprint?



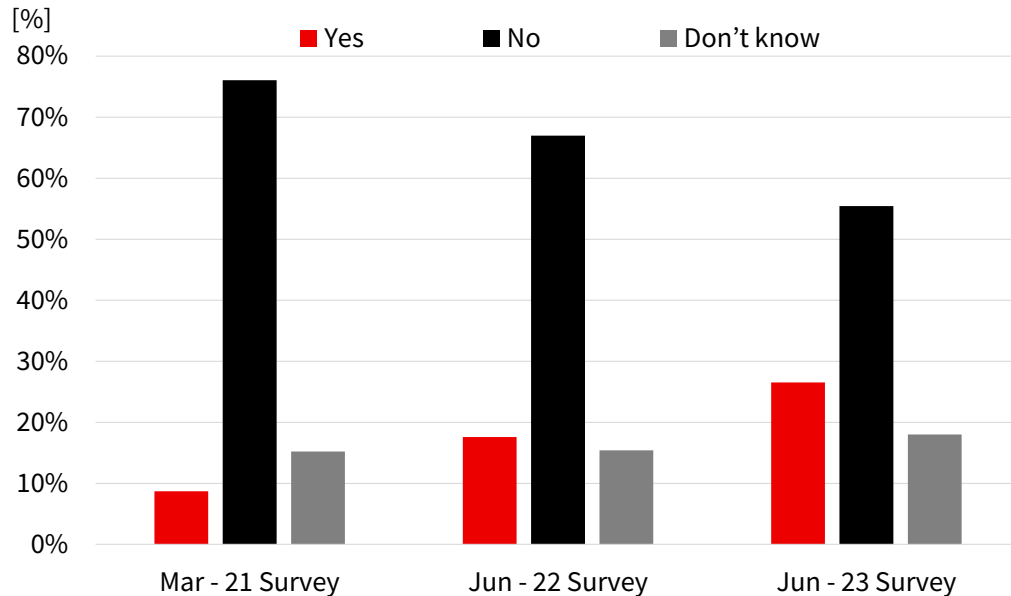
Source: Navigating Net Zero Business Survey

Survey Findings Overall Data

Net Zero policy

- Only a small fraction of NAB Renewables Survey respondents indicated their company had a ‘Net Zero’ policy in place. However, the number of respondents with a Net Zero policy has grown materially since the 2021 survey. Many companies have signalled that a plan is either currently in development or likely to be developed.
- Importantly, there has been a 30% reduction in the number of firms indicating they have no intention to establish a ‘Net Zero’ policy.

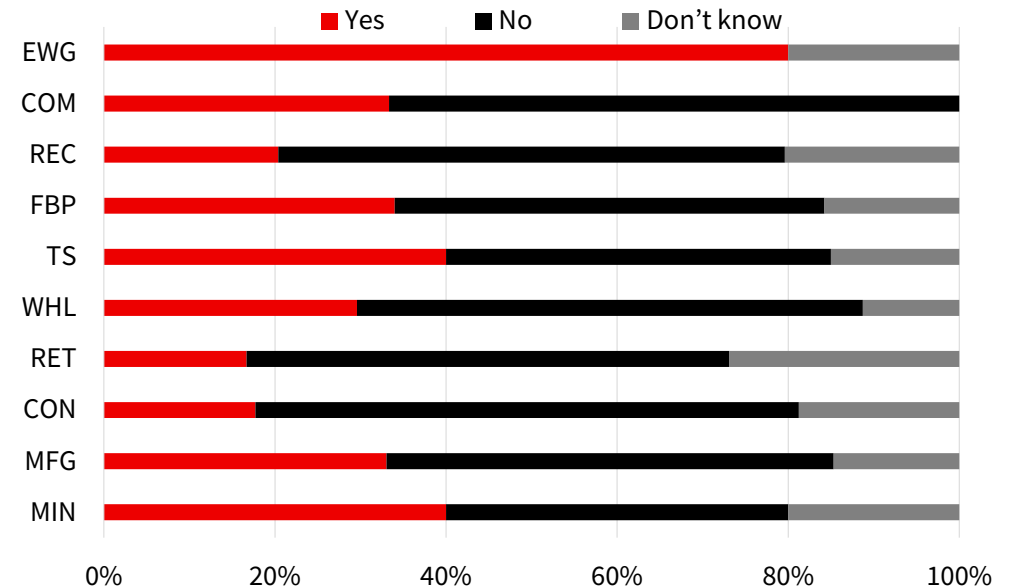
Chart 25: Does your organisation have, or is it developing, a plan to achieve net zero GHG emissions by 2050 or sooner (net zero transition plan)?



Source: Navigating Net Zero Business Survey

- The 2022 NAB-Deloitte Access Economics All Systems Go report noted that despite the number of net-zero targets established by ASX200 companies tripling in the year to October 2021, many businesses are yet to release a net-zero strategy.
- We expect there will be a material correlation in company plans to adopt a net zero plan with renewable energy targets.
- The S&P ASX50 company group are a guide on net zero strategy adoption by Australian corporates in our view. Our review of 2021 Sustainability Reports highlights 88% of S&P ASX50 companies either have or are planning a Net Zero Policy.

Chart 26: Does your organisation have, or is it developing, a plan to achieve net zero GHG emissions by 2050 or sooner (net zero transition plan)?



Source: Navigating Net Zero Business Survey

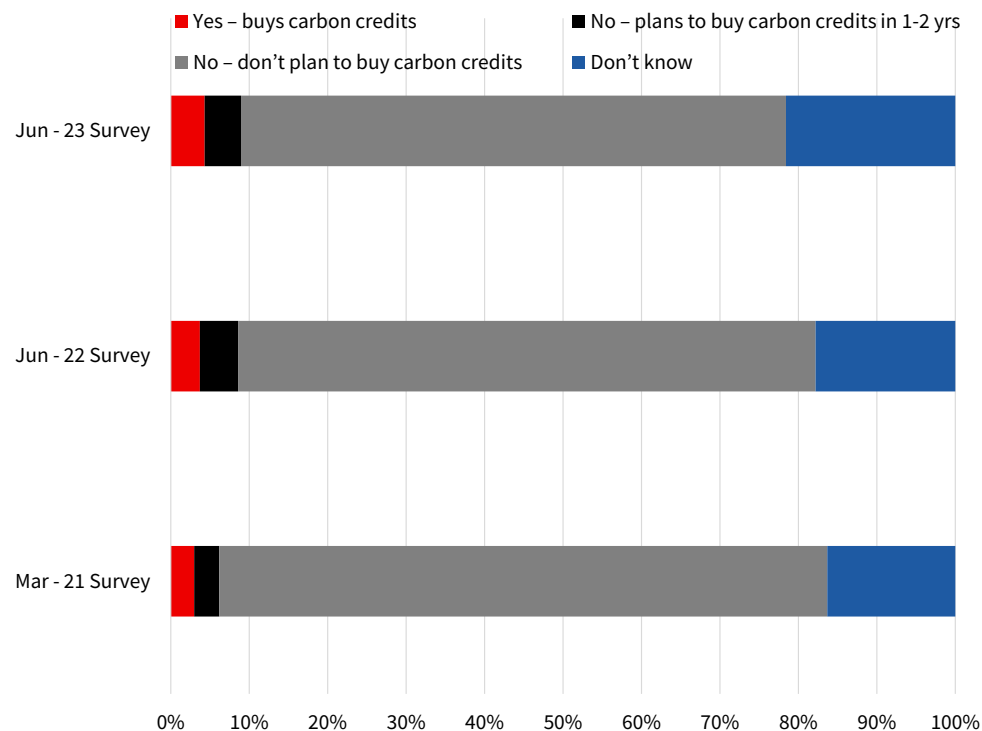
Survey Findings Overall Data

Carbon offsets

- The Navigating Net Zero Survey, and the NAB Renewable Survey data combined has consistently highlighted that a large majority of respondents have no plan or are unaware of plans to utilise carbon offsets to achieve net zero emissions.
- Various companies in the S&P ASX50 Group highlight net zero GHG emissions targets and compliance with the Australian Government’s Climate Active program which we expect to be a growing cohort.

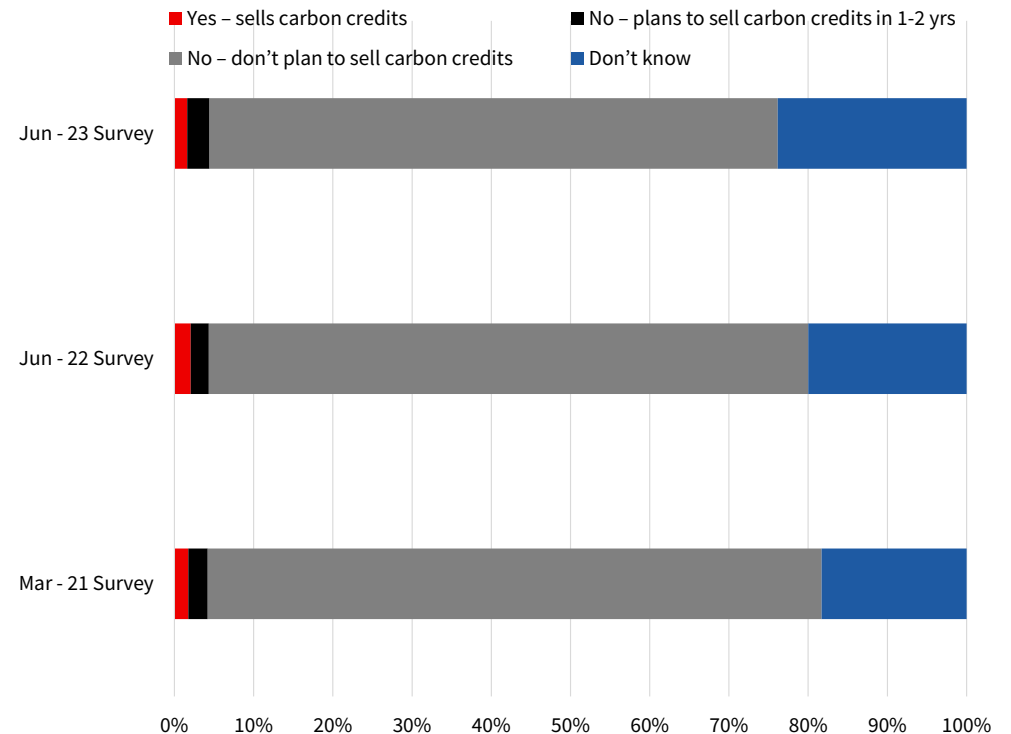
- Carbon offsets will be a relatively cost-effective tool for Australian businesses to manage their GHG emissions profile. More than half of the S&P ASX50 companies indicate carbon offsets as part of their strategy in managing their net zero emission profiles by 2050 and 2030.

Chart 27: Does your organisation Buy carbon credits?



Source: Navigating Net Zero Business Survey

Chart 28: Does your organisation Sell carbon credits?



Source: Navigating Net Zero Business Survey

**Results varied by
size of Enterprise**

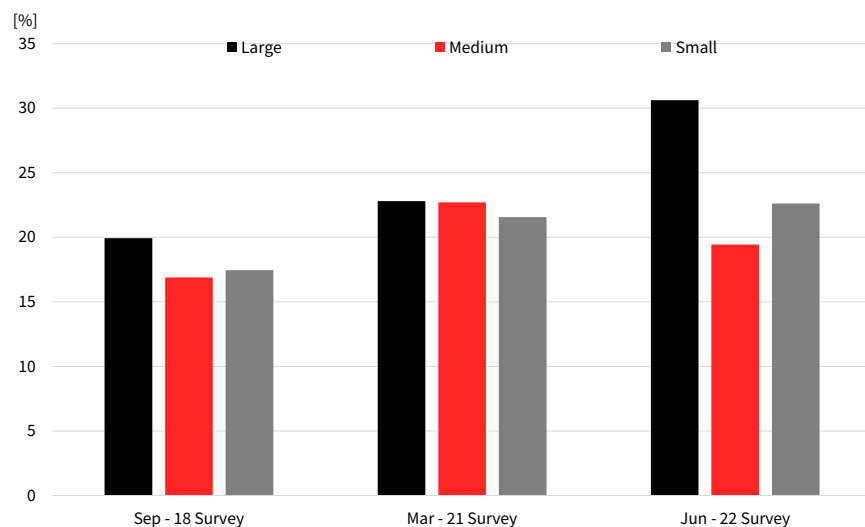
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Survey Findings by employee size

Firm size not a great differentiator in terms of renewable energy policy adoption

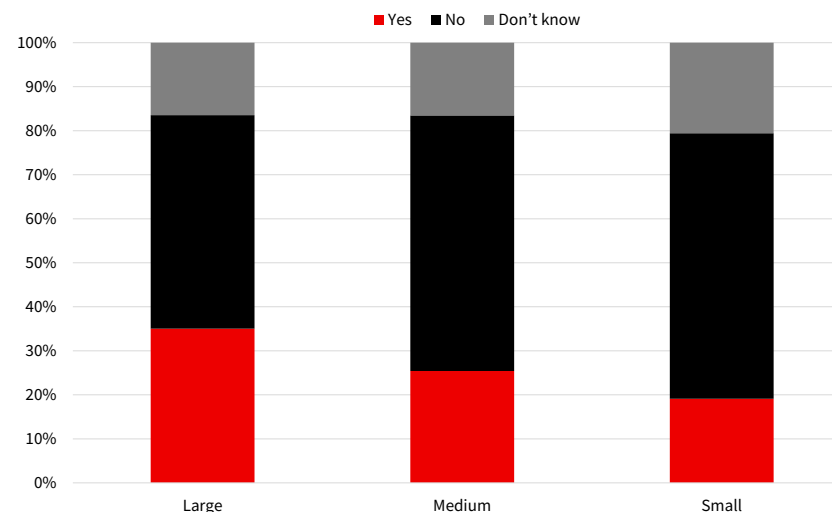
- The Navigating Net Zero Survey can be broken down into employee size where a large firm has 200 plus employees, a medium has 100-199 employees and a small firm has 35-99 employees.
- Similarly, larger companies only performed slightly better on development of net zero transition strategy implementation.
- However, over the history of the NAB Renewables and the recent Navigating Net Zero surveys the greatest increase in firms adopting a renewable energy policy was found in the large firms at 31% in 2022 versus 19% in 2018 – see Chart 28.

Chart 30: A renewable energy policy ('Yes' we have a policy)



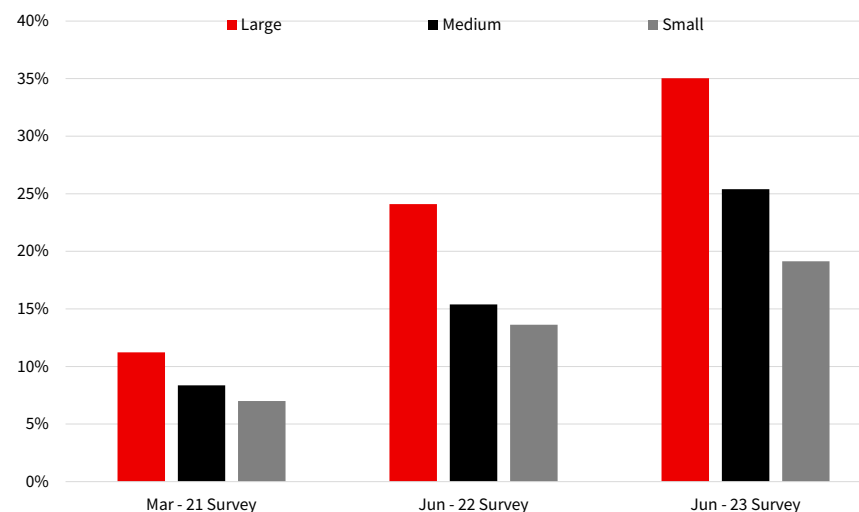
Source: Navigating Net Zero Business Survey

Chart 31: Does your organisation have, or is it developing, a plan to achieve net zero GHG emissions by 2050 or sooner (net zero transition plan)?



Source: Navigating Net Zero Business Survey

Chart 32: The shift to a net zero GHG emissions plan by 2050 or sooner ('Yes' we have a policy)



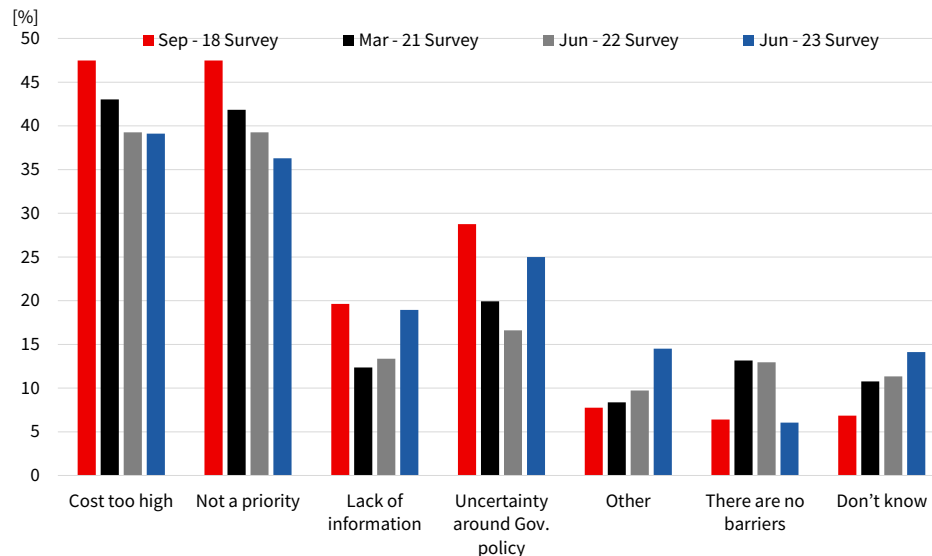
Source: Navigating Net Zero Business Survey

Survey Findings by employee size

Barriers to renewable energy use

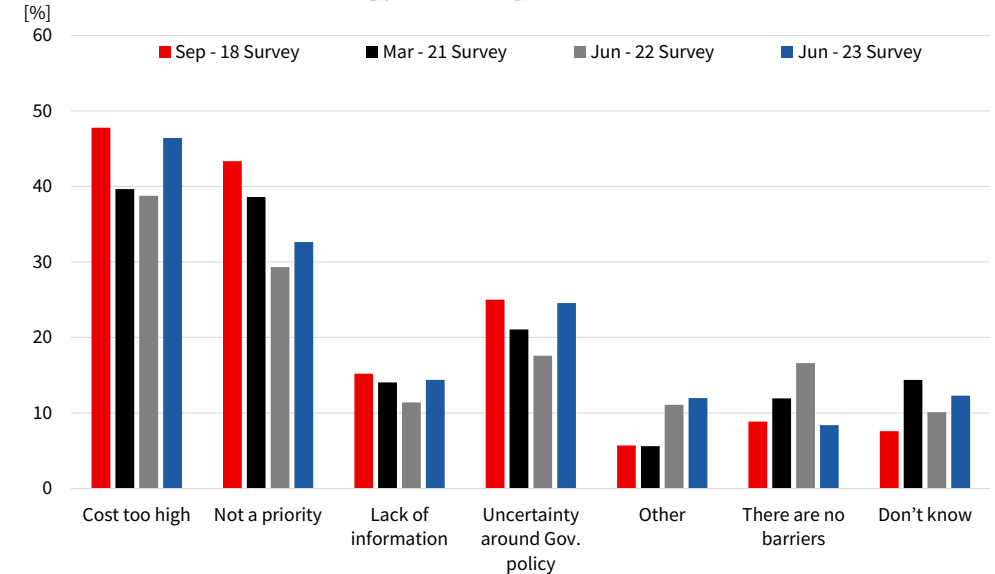
- Pricing of renewable energy continues to be identified as a barrier to usage but has declined as an issue evident by the current survey vs the 2018 survey.
- The Navigating Net Zero Business Survey does not report a significantly differentiated response based on size of organisation for the barriers to renewable energy adoption.

Chart 33: What are the key barriers to the organisation using more renewable energy? – Medium firms



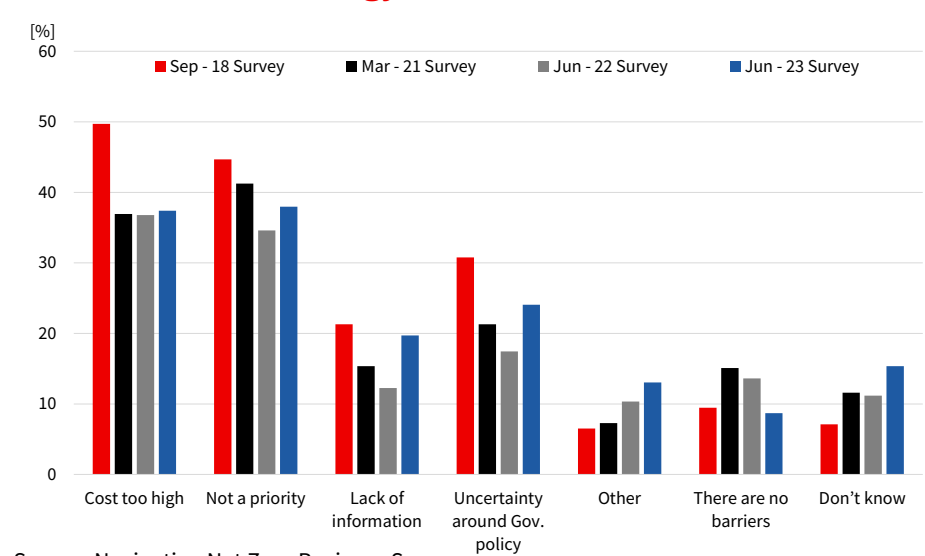
Source: Navigating Net Zero Business Survey

Chart 34: What are the key barriers to the organisation using more renewable energy? – Large firms



Source: Navigating Net Zero Business Survey

Chart 35: What are the key barriers to the organisation using more renewable energy? – Small firms



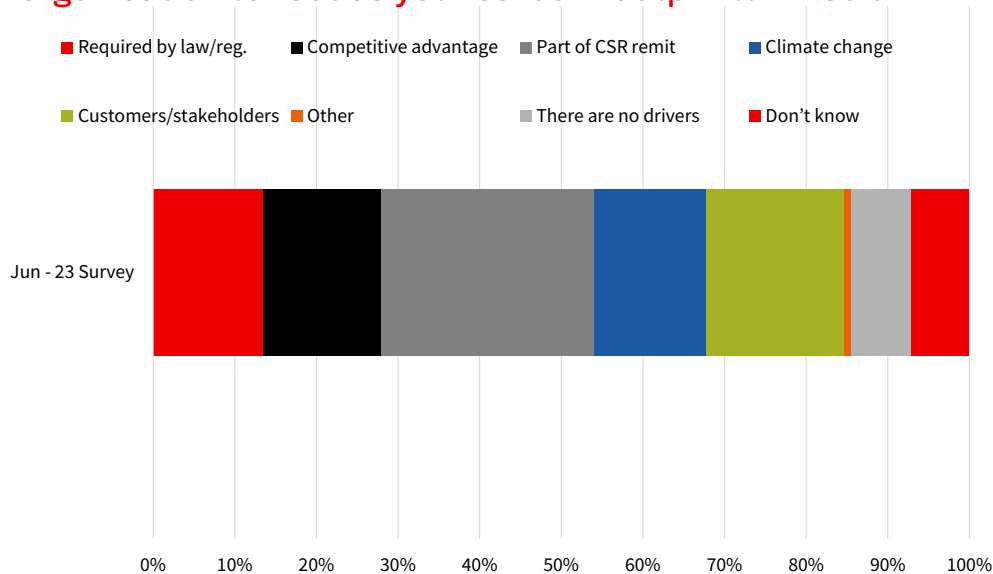
Source: Navigating Net Zero Business Survey

Survey Findings by employee size

Key drivers for your organisation to reduce your carbon footprint:

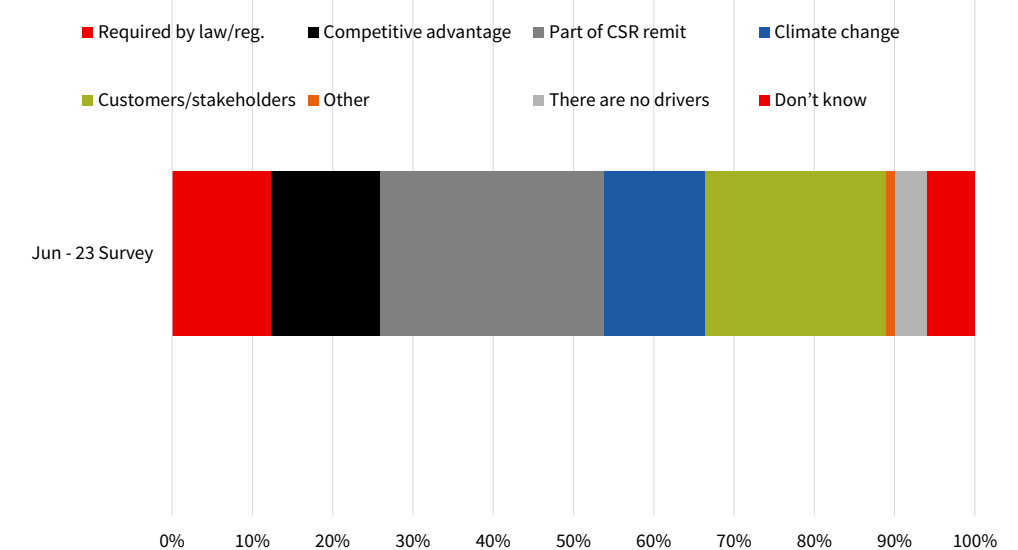
- Most respondents see their corporate and social responsibility remit as the main driver for their organisation to reduce their carbon footprint, followed by an expectation that their customers and stakeholders expect them to be doing it. The latter is a noticeably higher percentage for large enterprises.
- Required by law/regulation, assist in reversing climate change and competitive advantage share is fairly equal across the survey with smaller entities seeing competitive advantage as being less important compared to the medium and large enterprises.

Chart 36: What are the key drivers, if any, for your organisation to reduce your carbon footprint? - Medium



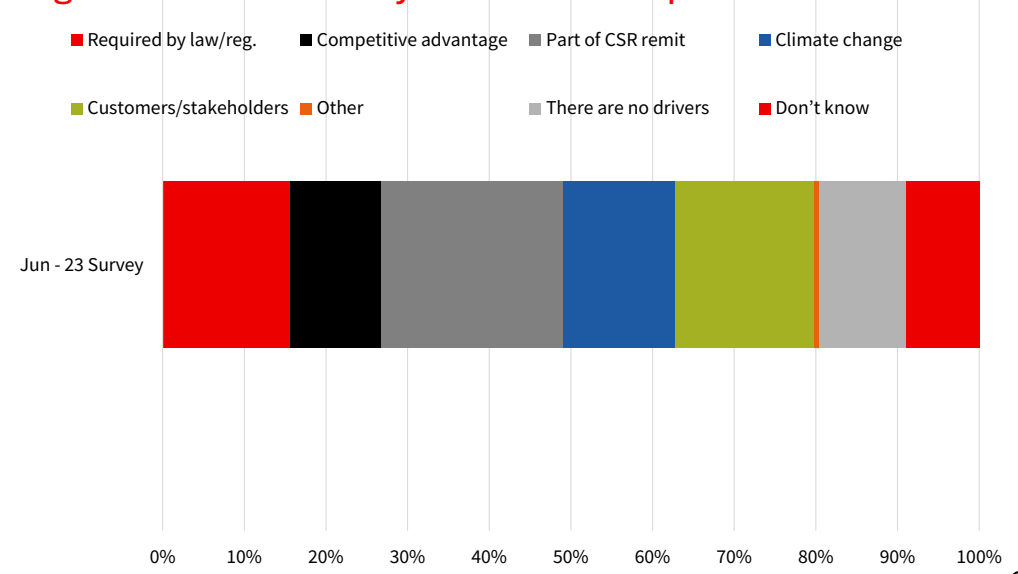
Source: Navigating Net Zero Business Survey

Chart 37: What are the key drivers, if any, for your organisation to reduce your carbon footprint? - Large



Source: Navigating Net Zero Business Survey

Chart 38: What are the key drivers, if any, for your organisation to reduce your carbon footprint? - Small



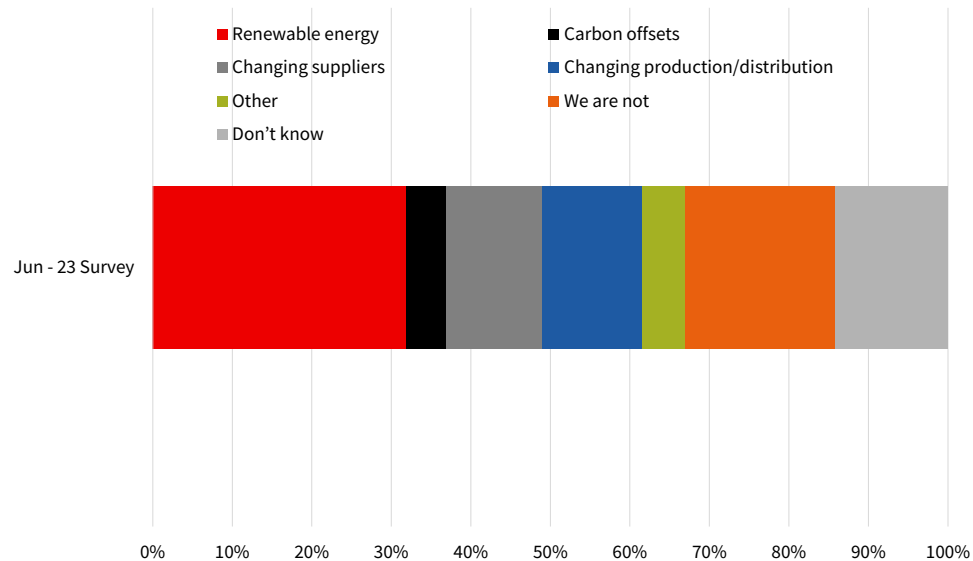
Source: Navigating Net Zero Business Survey

Survey Findings by employee size

Key strategies your organisation is using to reduce your GHG emissions:

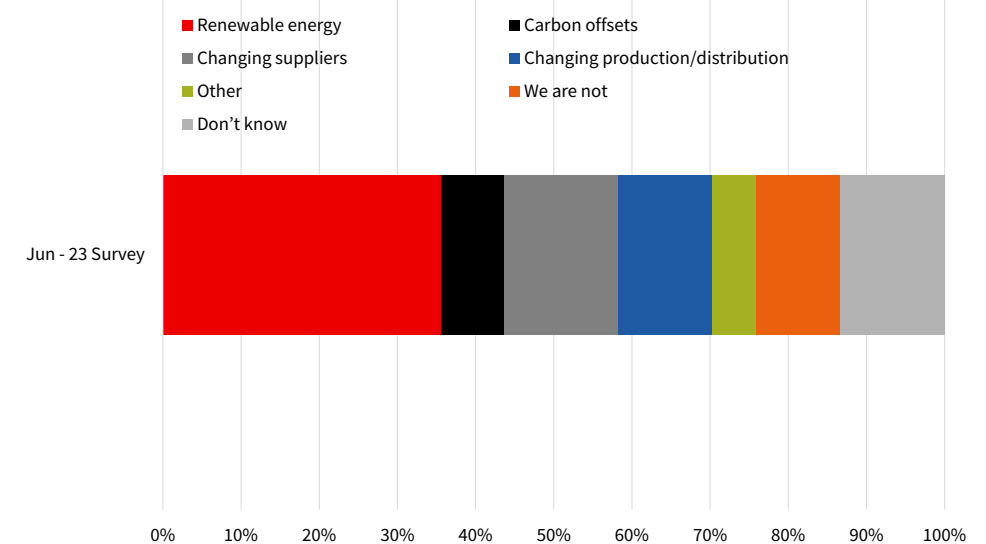
- The biggest strategy that companies plan to employ to reduce their GHG emissions profile is clearly renewable energy, with ~35% of large enterprises stating they will be using renewables to reduce their footprint.
- This is slightly reduced for medium sized companies with ~32%, followed by ~28% of small companies looking to renewable energy to reduce their GHG emissions profile.
- Interestingly ~12 of 19% of respondents do not know how they will reduce their GHG emissions profile.

Chart 39: What are the key drivers, if any, for your organisation to reduce your carbon footprint? - Medium



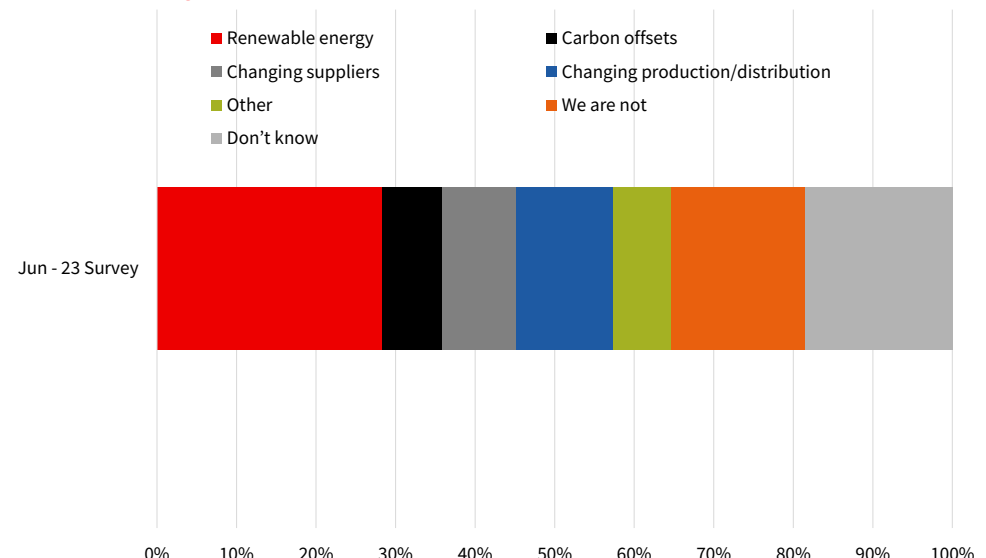
Source: Navigating Net Zero Business Survey

Chart 40: What are the key drivers, if any, for your organisation to reduce your carbon footprint? - Large



Source: Navigating Net Zero Business Survey

Chart 41: What are the key drivers, if any, for your organisation to reduce your carbon footprint? - Small



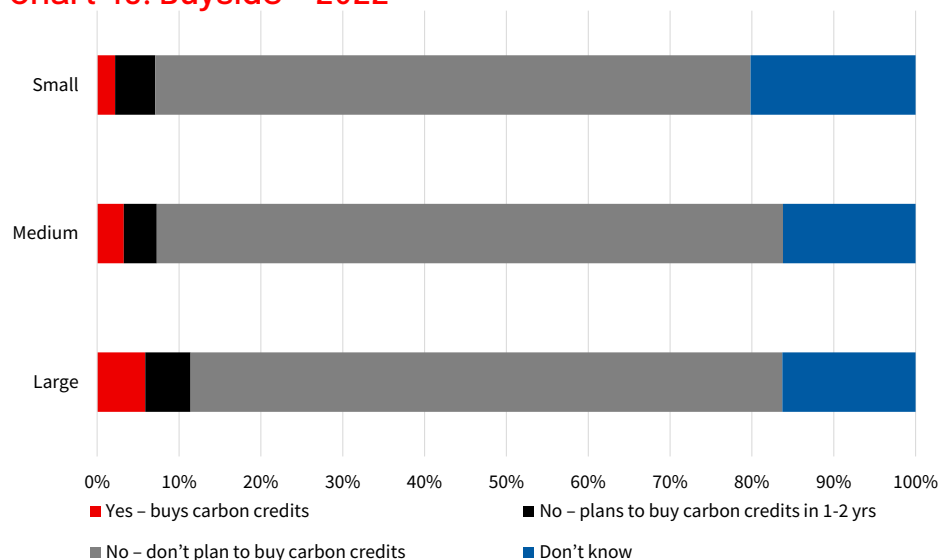
Source: Navigating Net Zero Business Survey

Survey Findings by employee size

Does your organisation participate in carbon trading or carbon sequestration/credit generation? Buy side

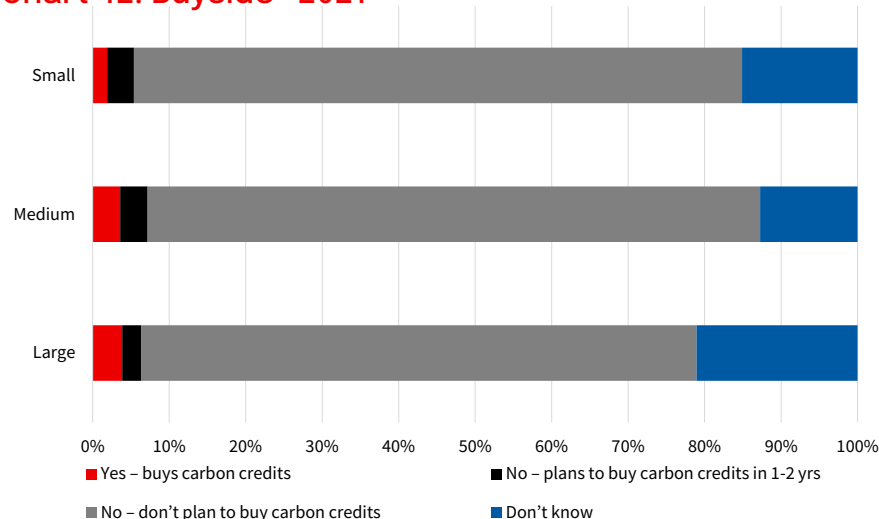
- Concerningly there has been a noticeable uptick in respondents unaware if they will buy carbon offsets to reduce their GHG emissions profile.
- Since the survey was done last year only 6% of large companies continue to expect to use carbon offsets. With similar responses for both 2022 and 2023 for both small and medium companies with the latest survey showing only 3% plan to buy carbon offsets.

Chart 43: Buyside - 2022



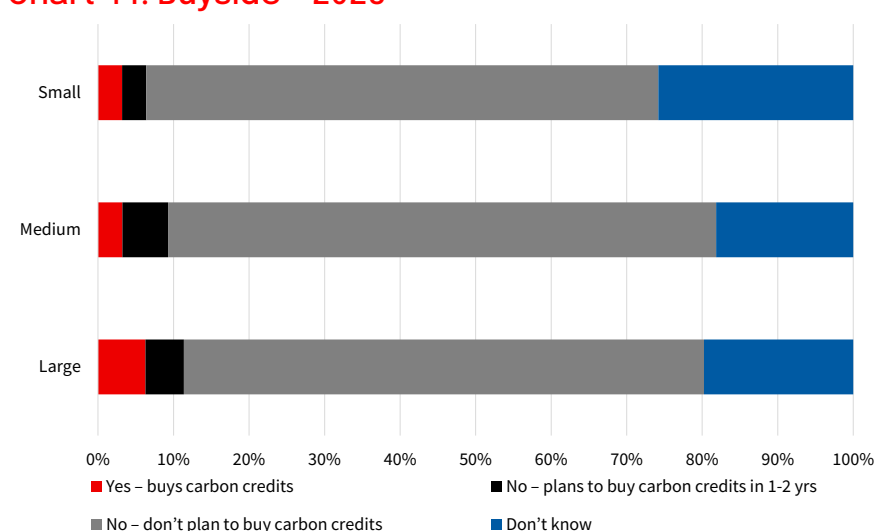
Source: Navigating Net Zero Business Survey

Chart 42: Buyside - 2021



Source: Navigating Net Zero Business Survey

Chart 44: Buyside - 2023



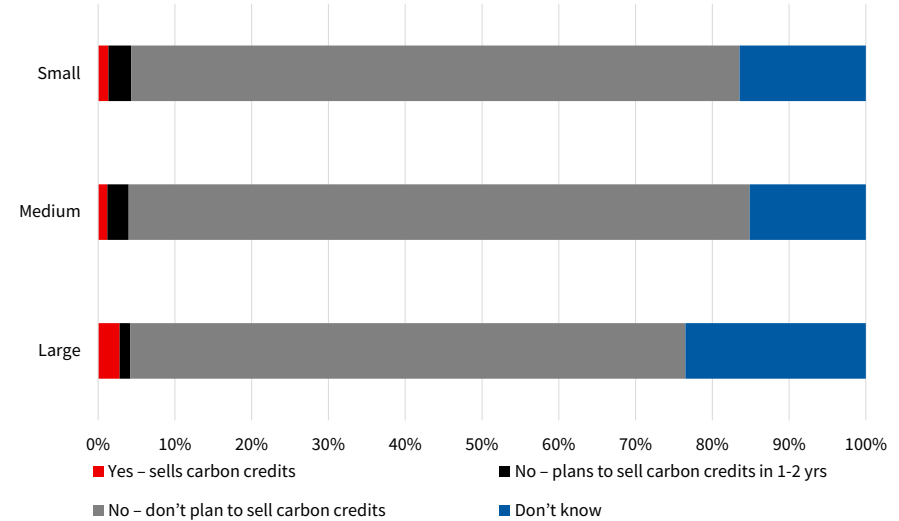
Source: Navigating Net Zero Business Survey

Survey Findings by employee size

Does your organisation participate in carbon trading or carbon sequestration/credit generation? Sell side

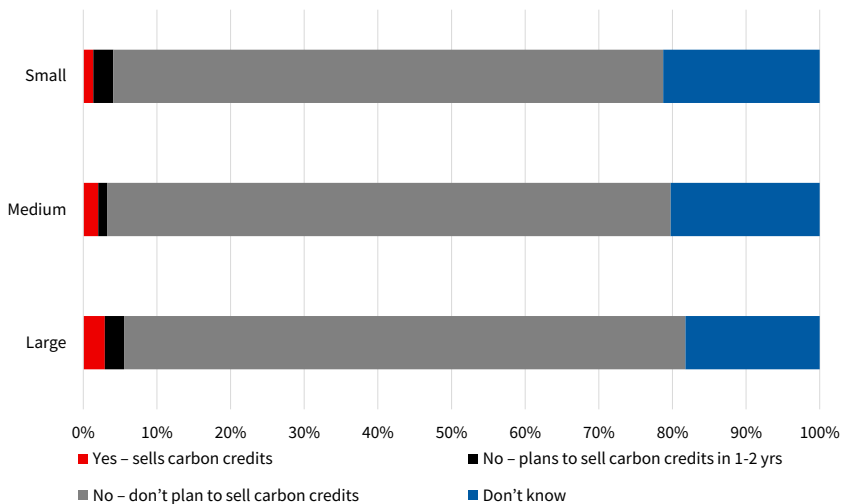
- An even smaller number of respondents expect to be selling carbon offsets, which would suggest not many of the respondents currently have plans to invest in sequestration activities beyond what they may require to offset their own GHG emissions profile.
- The number of respondents that ‘don’t know’ continues to grow versus the those that previously had no intention to sell carbon offsets contracts.

Chart 45: Sell side -2021



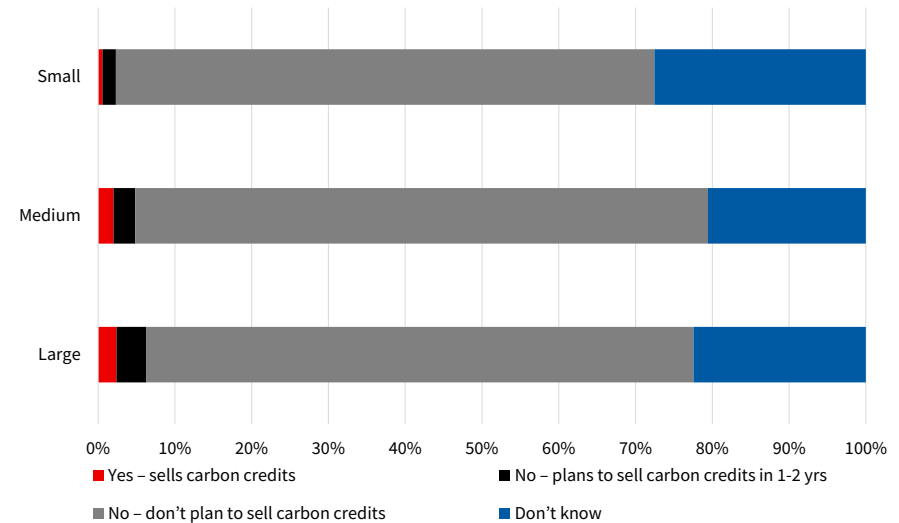
Source: Navigating Net Zero Business Survey

Chart 46: Sell side - 2022



Source: Navigating Net Zero Business Survey

Chart 47: Sell side - 2023



Source: Navigating Net Zero Business Survey

Results by Industry

4.3

Chart key for industries

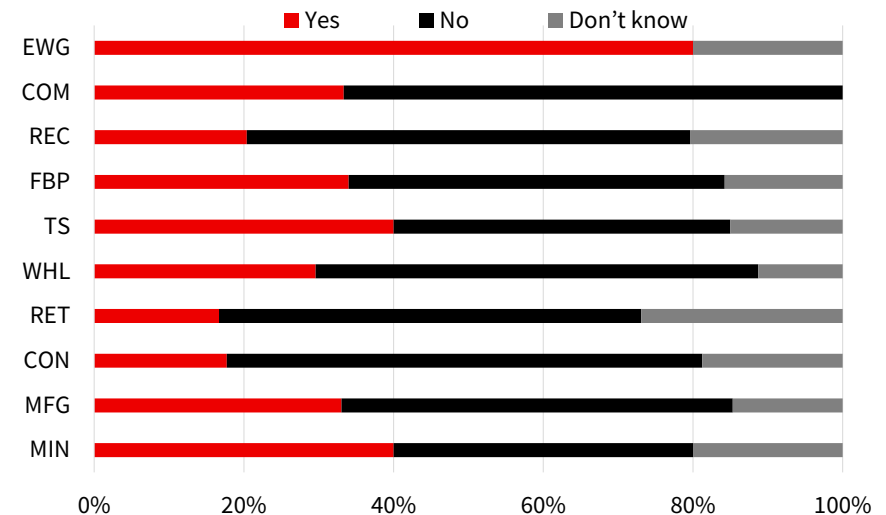
MIN	Mining
MFG	Manufacturing
CON	Construction
RET	Retail
WHL	Wholesale
TS	Transport
FBP	Finance, Business and Property
REC	Recreation and Personal Services, Accommodation, Cafes, Restaurants
EWG	Electricity, Water and Gas
COM	Telecommunication

Survey Findings by Industry

Electricity, Mining and Transport leading in terms of net zero transition plan adoption

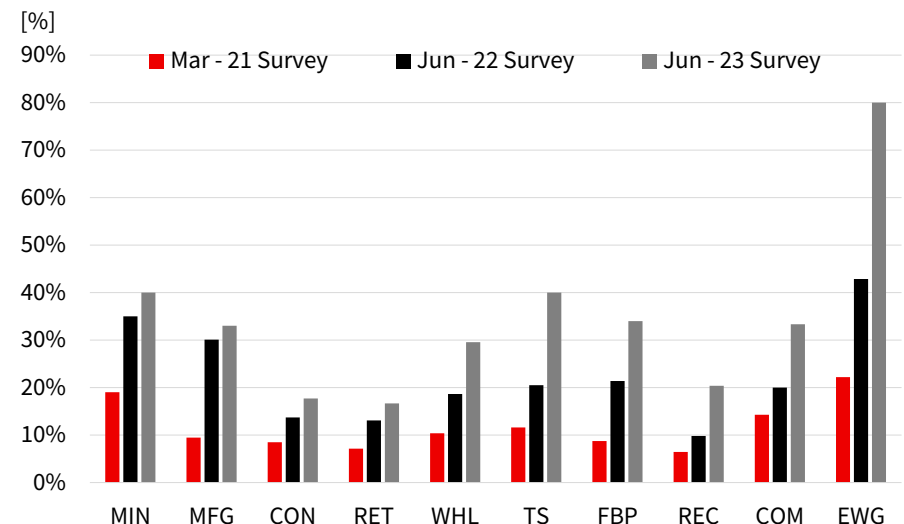
- In terms of an industry perspective, the Navigating Net Zero Survey is broken down into ten industry groups.
- The 2023 survey indicates strong growth vs 2022 of businesses that have a net zero policy in place, with 15-40% of respondents confirming a strategy except Electricity market participants who outperformed significantly with 80% confirming a net zero strategy was in place.
- In terms of Net Zero policy, Electricity, Mining and Transport lead in terms of having an active Net Zero policy while Construction, Retail and Recreation lag.
- While the growth in respondents with net zero strategies is positive, the survey highlights that the majority of survey respondents still either 'Don't know' or do not have a Net Zero strategy in place.
- Wholesale, Transport, Finance and Electricity all showed significant growth in positive respondents in the 2023 Navigating Net Zero Survey.

Chart 48: Does your organisation have, or is it developing, a plan to achieve net zero GHG emissions by 2050 or sooner (net zero transition plan)?



Source: Navigating Net Zero Business Survey

Chart 49: The shift to a net zero GHG emissions plan by 2050 or sooner ('Yes' we have a policy)



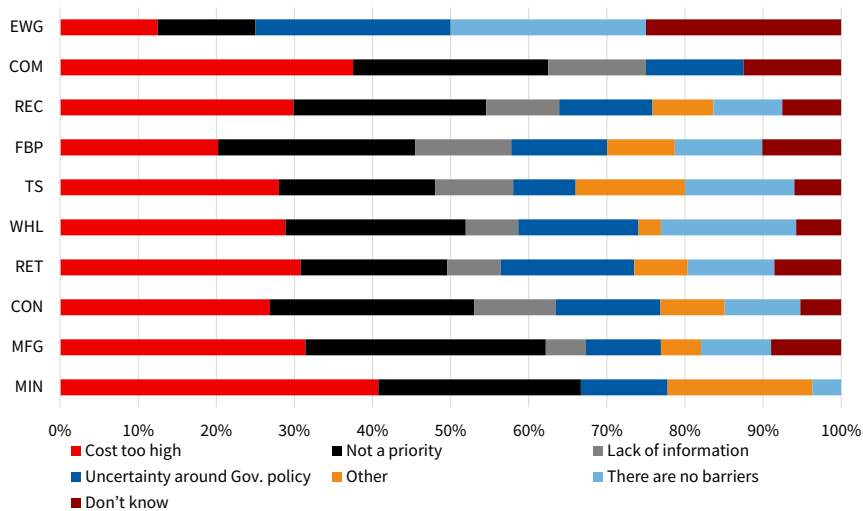
Source: Navigating Net Zero Business Survey

Survey Findings by Industry

Barriers to renewable energy use

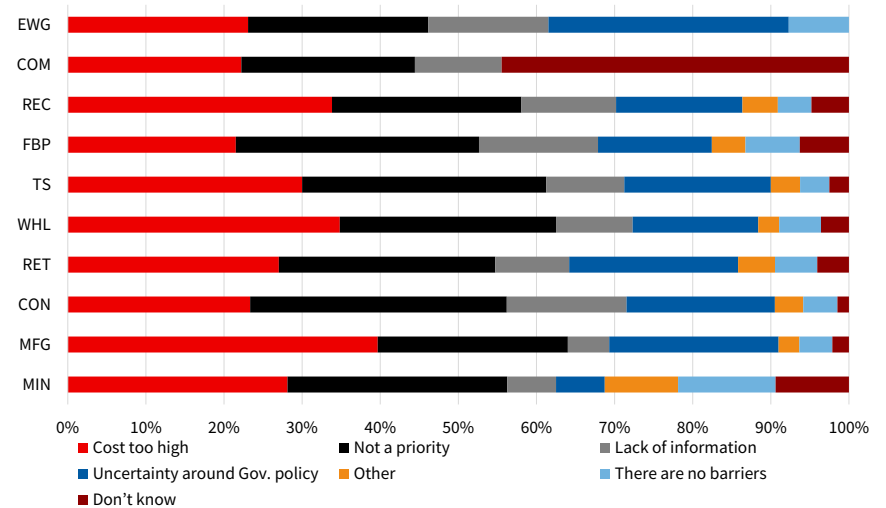
- Most Navigating Net Zero Business Survey respondents (excluding electricity, water and gas) continue to see cost as the largest barrier to moving towards renewable energy.
- The number of respondents that have highlighted renewable energy isn't a priority for their business has reduced since the first survey conducted in 2018. None of the respondents within the industries electricity, water and gas and telecommunication highlight it is not a priority.
- Furthermore, uncertainty surrounding government policy is the most significant barrier to increase renewable adoption in the electricity, water and gas industry.

Chart 51: Barriers to renewable energy use - 2022 survey



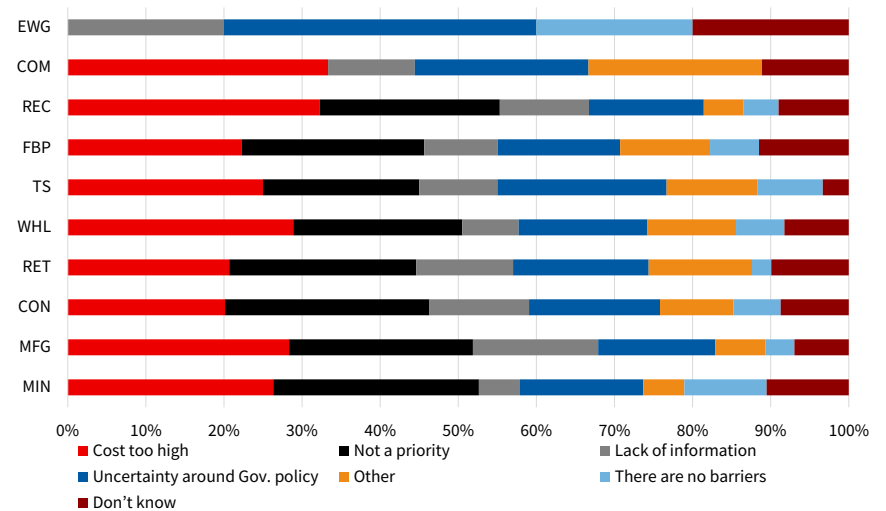
Source: Navigating Net Zero Business Survey

Chart 50: Barriers to renewable energy use - 2018 survey



Source: Navigating Net Zero Business Survey

Chart 52: Barriers to renewable energy use - 2023 survey



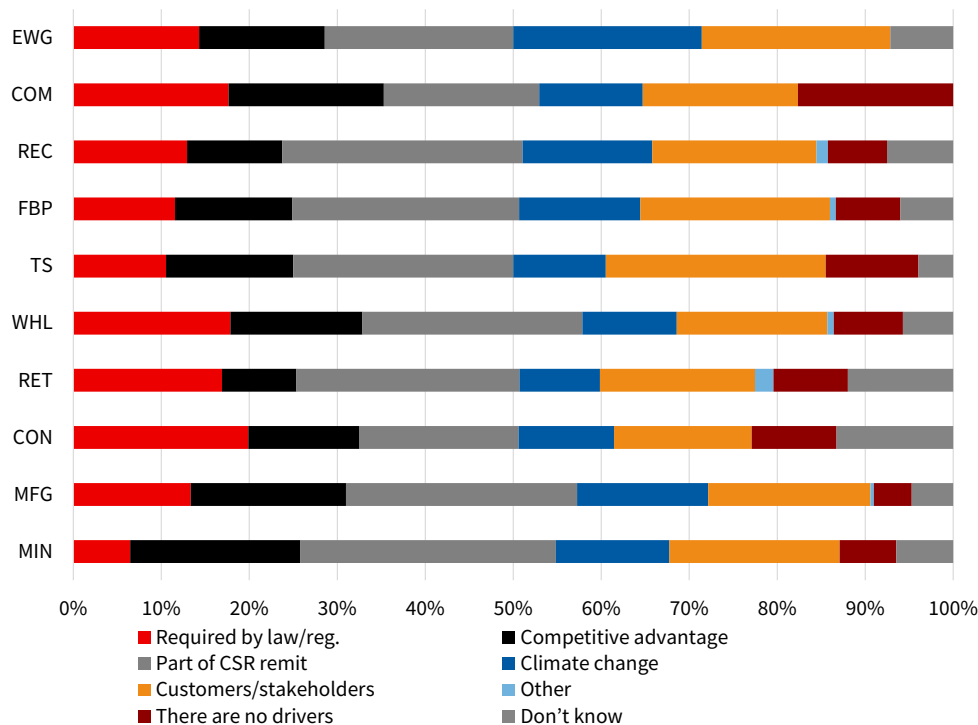
Source: Navigating Net Zero Business Survey

Survey Findings by Industry

Key drivers for your organisation to reduce your GHG emissions profile:

- Most Navigating Net Zero Business Survey respondents highlight both corporate social responsibility (CSR remit) and expectations of their customers/stakeholders as key drivers to reduce their GHG emissions profile.
- Miners, telecommunication providers, and financial services see competitive advantage as a key driver to reduce their GHG emissions profile.

Chart 53: Key drivers for your organisation to reduce your carbon footprint - 2023

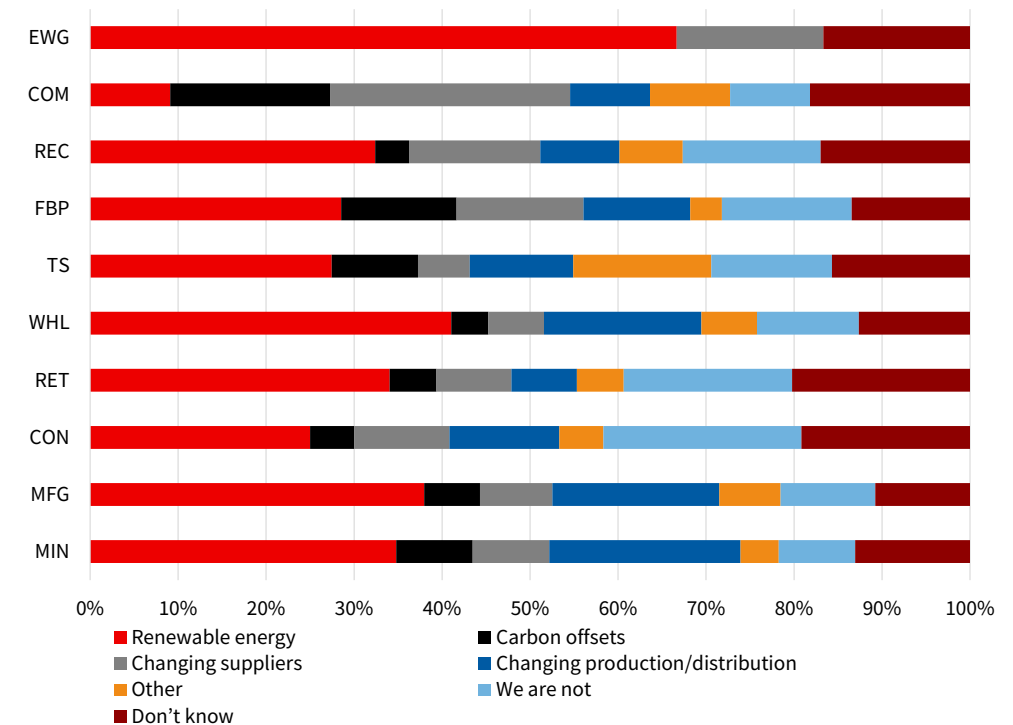


Source: Navigating Net Zero Business Survey

Key strategies your organisation is using to reduce your GHG emissions profile:

- Navigating Net Zero Business Survey respondents continue to highlight the importance of renewable energy as part of their strategy to reduce their GHG emissions profile. We note that ~65% of respondents from the electricity, water and gas industries use renewable energy which is ~60% above the second highest respondent, wholesale industries, at ~40%.

Chart 54: Key strategies your organisation is using to reduce your carbon footprint - 2023



Source: Navigating Net Zero Business Survey

Survey Findings by Industry

Does your organisation participate in carbon trading or carbon sequestration/credit generation?

- Very few Navigating Net Zero Business Survey respondents plan to use carbon offsets as a mechanism to manage their GHG emission reduction targets. However the electricity, water and gas sectors appear to be early adopters of these products.
- For large emitters carbon offsets are likely to form part of a short term strategy to manage their GHG emission targets, this is highlighted in the respondents within the mining sector with only ~6% currently buying carbon offsets.
- In contrast, lower GHG emitters and businesses with constrained balance sheets are likely to benefit more from carbon offsets on a sustained basis.
- Participation in carbon offset markets by our survey respondents is skewed to the purchase of carbon offsets (vs selling). Indicating most respondents have a simple approach to these markets. We note the electricity, water and gas respondents are equally participating on both buy and sell side.

Chart 55: Does your organisation participate in carbon trading or carbon sequestration/credit generation? - Buy

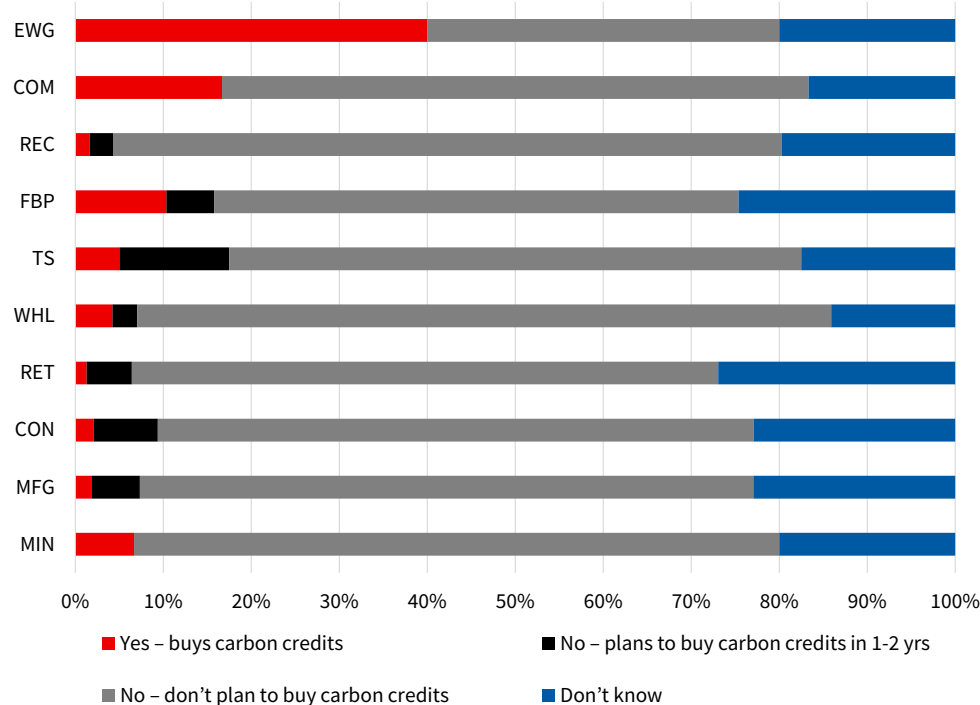
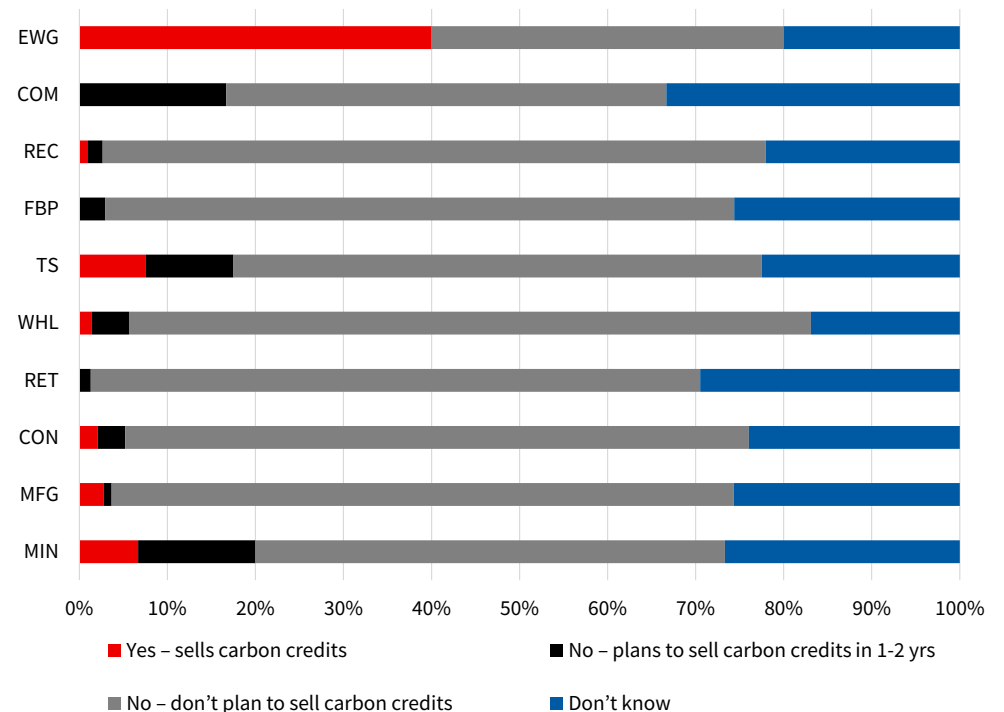


Chart 56: Does your organisation participate in carbon trading or carbon sequestration/credit generation? - Sell



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