

Corporate Renewable Power Purchase Agreements in Australia

State of the Market 2023



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Executive Summary

2023 was a record year for Corporate PPAs

Corporate Renewable Power Purchase Agreements (Corporate PPAs) continue to be a major element of the market for large-scale renewable energy as the energy transition deepens in Australia. For the second year running, the deal volume hit a new record year - just over 1700 MW after reaching around 1500 MW last year.

Since 2017, based on public information we estimate there have been 165 Corporate PPAs negotiated, contracting over 7.4 GW of renewable energy generation.¹

In a challenging market, experienced corporate buyers and public sector buyers led the way

- Many participants described the Australian corporate renewables PPA sector in 2023 as a 'sellers market'. Within the context of a slowdown in supply of new renewable energy projects due to a multitude of factors such as transmission constraints and slower planning approvals, many participants noted there was an excess of demand for PPAs relative to supply. Buyer demand, underpinned by net zero and sustainability targets, remains high. There were various manifestations of a sellers market including higher prices (also reflecting supply-chain cost increases) and reports of developers conducting quasi-auctions amongst buyers.
- Within this context, it's notable that many of the deals were signed by experienced, high-profile corporates that had already signed PPAs including:
 - BHP: 6th PPA (200 MW, MacIntyre Wind Farm, Western Downs Green Power Hub & Kaban Wind Farm & storage, Qld)
 - Ikea: 1st PPA (195 MW, Golden Plains Wind Farm, Vic), 2nd PPA (13 MW, Peak Hill & Trundle Solar Farms, NSW) and 3rd PPA (152 MW, Tilbuster Solar Farm, NSW).
 - Telstra: 5th PPA (60 MW, Munna Creek Solar Farm, Qld) and 6th PPA (70 MW, Bundaberg Solar Farm, Qld)
 - Woolworths: 3rd PPA (Bango WF (205 MW, Bango Wind Farm and Darlington Point Solar Farm, NSW).
 - NBN: 2nd (29 MW, Macarthur Wind Farm Wind, Vic) and 3rd PPA (27 MW, Munna Creek Solar Farm, QLD).
 - Lion Brewery: 2nd PPA (71 MW, Woolsloga Solar Farm, QLD).
- Around two-thirds of the deal volumes were PPAs signed by experienced corporates returning to market.
- As with past years, public sector organisations were also prominent, notably regional local government buyer groups.
- Fortescue Metals signed the first 'Hydrogen PPA' a 338 MW PPA with Bulli Creek solar farm (and battery) and some household names signed their first PPA (e.g. Arnotts, Asahi, Boral, Optus).
- However, in a challenging context, the market was mostly comprised of experienced buyers. Consequently, there was a notable shift towards larger deals (>100 MW) and fewer small deals (<20 MW) in 2023.

¹ These figures are drawn from BRC-A's PPA database based on publicly available information. Industry participants inform us that there are some PPAs that are not public.



Queensland is now the leading state for Corporate PPAs

Queensland has led the pack in both 2022 and 2023 – and has overtaken NSW as the leading state for Corporate PPAs. Over 700 MW was contracted through Corporate PPAs followed by around 400 MW in NSW and 300 MW in Victoria.

Amidst the market ups and downs, there is largely continuity in the drivers and barriers for PPA buyers

For the past 4 years, BRC-A has conducted an annual survey of buyers, advisers and developers – which for the most part has found continuity on both the drivers and barriers for PPA buyers:

- **Market volatility had only a limited impact on Corporate PPAs:** for the past 2-years, BRC-A has surveyed buyers, advisers and developers on the impact of wholesale market volatility on demand for Corporate PPAs. The volatility does not appear to have had a major impact - most buyers, advisers and developers reported the market volatility in 2022 had a positive impact on demand for PPAs.
- **The PPA market continues to be driven by buyers with sustainability targets:** BRC-A's annual survey has year after year found around 2/3 buyers nominate sustainability targets or policies as the major driver for PPAs ahead of price or financial considerations. The growth in organisations with net zero targets continues to underpin demand for Corporate PPA.
- **Financial risk, price and developers are the top-line considerations for buyers assessing PPAs – but community and environmental issues are rated higher than developers think:** the top 3 issues for buyers evaluating PPAs has consistently been financial risk, price and developer reputation (in that order) – but buyers have also consistently ranked the second tier of issues (community support, benefits, environment and biodiversity) higher than developers expect.
- **PPAs are still hard to do – but maybe getting a little easier:** fewer buyers have reported it took longer than 18 months to negotiate PPAs in the past couple of years and more buyers rank the difficulty as a '3' or '4' than a '5'. Buyers report the key barriers are securing internal support and the challenge of finding the right PPA model to fit their organisation – but it appears they are a bit quicker and easier than earlier years.

There was a modest uptick in PPAs with new projects, but they remain uncommon

- In 2022, there were virtually no PPAs with new projects. In 2023, there were also few PPAs with new projects but they were larger deals. Consequently, whilst they continued to remain uncommon, deal volumes were reasonably evenly split between PPAs with new projects (28 per cent), committed projects that had secured finance (33 per cent) and operational projects (39 per cent).
- The year was headlined by a large PPA with a solar and battery project by Fortesque Metals to supply a proposed new hydrogen project. NBN, Telstra and off-grid miner Bellevue Gold also negotiated new PPAs.

The market was quite evenly split between wholesale and retail PPAs

- Whilst there had been a marked shift from Wholesale PPAs (contracts-for-difference or derivatives directly with projects) to Retail PPAs (PPAs intermediated by retailers between the project and buyers), in the last couple of years wholesale PPAs have staged a return. Around 40 per cent of deals and capacity negotiated through Corporate PPAs were wholesale PPAs in 2023.
- Whereas it appeared wholesale PPAs might experience secular decline, it is now clear the share between the two major deal types will wax and wane depending on the types of buyers and market conditions. Notably, larger and experience buyers are more likely to choose wholesale PPAs and the increase in future electricity prices has increased the cost of firming (and therefore improved the relative value of Wholesale PPAs).

Government PPAs were the big mover in 2023

There are five market segments in Australia's large-scale renewable energy market:

- Utility PPAs: deals between electricity retailers and renewable energy projects



- Merchant projects: solar and wind farms that sell into the wholesale market without a PPA
- Government PPAs: auctions by government for renewable energy using general revenue (i.e. not for their own operations)
- Corporate PPAs: deals with renewable energy projects by public and private sector buyers for their own operations.
- State-owned utilities: publicly-owned retailers in Queensland and Snowy Hydro.

Corporate PPAs increased in 2023 but their market share declined due to two large auction rounds in NSW which increased the share of Government PPAs; 2767 MW of solar, wind, battery and a compressed air storage project were awarded Long-Term Energy Supply Agreements in May and December 2023. There was only a modest increase in utility PPAs negotiated by private retailers and less activity by state-owned utilities.

Most buyers retire LGCs – but a significant minority are selling LGCs until they are required to meet organisational targets

Prices for the green certificates associated with renewable electricity generation (Large Generation Certificates, or LGCs) have remained high. In the secondary market for LGCs, prices have generally ranged from \$45 - \$55 during 2023. One of the key factors is the high voluntary demand from organisations to meet emissions reduction targets and lower supply due to slower development of renewables generation than projected. There are on-going concerns from some market participants about securing LGCs to meet 2025 targets.

LGCs are understood to be sold at much lower prices as part of PPAs. Buyers face a choice on what to do with the LGCs. If they are 'retired' with the Clean Energy Regulator to claim the emissions reductions, there is an opportunity cost from the foregone revenue which could be made from selling the LGCs. Market participants reported that some parties are postponing retirement of LGCs until the year of their emissions reduction commitments (e.g. 2025). In this year's survey, we asked buyers and advisers for the first time about their strategies for managing LGCs. Just over half of buyers reported retiring the LGCs, but a significant minority (around one-quarter) are selling LGCs now and intending to retire at a later day and a smaller group (around 10 per cent) just sell the LGCs

Whilst there has been some uncertainty about the future of green certificates beyond 2030 when the RET finishes and impacts on prices and availability, advisers report that it has become increasingly standard to negotiate clauses that ensure buyers retain rights to any green products and the Federal Government is now consulting on a replacement certificate from 2030 – the Renewable Energy Guarantee of Origin, or REGOs).

PPAs are starting to move into battery storage and hydrogen

For the first time, the BRC-A annual survey also asked how often 'firming' was a component within PPAs. Around 40 per cent of advisers reported firming and battery storage were 'common' or 'sometimes' a part of PPAs, whereas three-quarters of buyers said it was 'never' or 'rarely' a part of their PPA. It would appear advisers are now increasingly grappling with models to integrate firming but it is still rare for buyers. This may change especially for larger industrial buyers. BHP, for example, negotiated a PPA with CleanCo in Queensland that incorporated 4 wind farms, access to excess renewable energy stored at the Wivenhoe pumped storage facility and a battery at Western Greens Power Hub.

What is the Future of Corporate PPAs under new policy frameworks?

The Corporate PPA market continues to evolve and reflect the wider dynamics of the energy transition. In the first phase (2016-20), Corporate PPAs were primarily developed by large corporates to leverage greater value and impact through wholesale PPAs negotiated directly with new projects. In the second phase (2020-23), Corporate PPAs (partly) filled the void after the achievement of the RET and the market expanded to a wider diversity of buyers via de-risked PPAs with operational projects brokered by retailers. Corporate PPAs may be entering a third-phase now as the post-RET policy architecture is established through the Capacity Investment Scheme, Renewable Energy Zones and a new green certificate regime (Renewable Energy Guarantee of Origin, or REGOs) from 2030.



Late 2023, the Federal Government announced an expansion of the Capacity Investment Scheme (CIS) which has major implications for Corporate PPAs. From April/May 2024, competitive tenders will be held every 6 months until 2027 to contract 23 GW of renewable energy and 9 GW of despatchable resources (e.g. battery storage). Although the scheme design is not yet established, it appears the CIS will be a variation on the NSW Long-Term Energy Supply Agreement (LTESA) auction model; that is, an options contract including minimum and maximum prices designed to enable projects to secure debt finance rather than a traditional contract-for-difference.

What are the implications for Corporate PPAs? Since the emergence of Corporate PPAs, there has been a view in some circles that Corporate PPAs are a passing trend that will decline once the major retailers or governments seriously return to contracting with large-scale renewable energy projects. Certainly, one scenario is that Corporate PPAs are crowded out as projects focus on bidding for contracts under the CIS instead of Corporate PPAs. The big 3 retailers that cover around 75 per cent of Australian electricity consumption will need to contract with a large volume of renewable energy and storage projects in coming years. However, it is unlikely that Corporate PPAs will fade out in our view: demand for Corporate PPAs is underpinned by emissions reduction, ESG and reputational drivers that will continue.

However, the CIS in particular will certainly impact on the dynamics of the Corporate PPA market. The experiences of NSW and Queensland provide some indications on the potential implications. In Queensland, state-owned utilities with mandates to sign PPAs have emerged as the dominant entities for contracting with new projects. Most (but not all) corporate PPAs have been retail PPAs signed with solar and wind farms that are in commissioning or operational after one of the state-owned utilities have signed a PPA to underwrite construction. A similar dynamic could emerge as the CIS scales up.

Under the NSW LTESA model, tender criteria encourage and reward bidders with alternative contracts such as Corporate PPAs because the aim is not to displace conventional market contracting. One of the weaknesses of earlier government auction processes was they effectively removed projects from the contracting market with impacts of liquidity and generator behaviour. Brad Hopkins (AEMO Services) noted after the announcement of the second round of LTESAs (November 2023):

“Previously, people needed a 15-year PPA with a credit worthy utility in order to get a project built. They’re showing up to our tenders, and they’re saying, we need enough financial support from the LTESAs to pay our debt. But they say we’re happy and we’ve got a five-year contract with a medium sized company or a large corporate or a new entrant retailer. And our equity investors are happy to take the risk that we get another contract in another five years”²

The fundamental role of the LTESA is to enable debt finance with other contracts required to deliver equity returns.

There are a number of moving parts as the scheme design is not finalised and outcomes will be dependent on a range of factors such as the strategies of market participants – but it may be that the role and composition of Corporate PPAs changes more than the volume. The scale of investment required adds confidence that offtake demand from Corporate PPA buyers will continue to have a role. In the draft 2024 Integrated Systems Plan, AEMO has estimated that in order for Australia to achieve the 2030 target of 82 per cent renewable electricity an average of 6 GW of renewable energy needs to be built on average each year. Corporate PPAs may be part of bids through the CIS auctions for new projects but remain the minority as in recent years because only larger parties would be attractive to enhance bids for the CIS – and the role of PPAs increasingly centres on revenue certainty through commissioning and operational phases. The shift towards more PPAs signed with commissioned and operating PPAs could be consolidated as the big retailers re-enter the market and negotiate deals after securing a contract through the CIS.

2 G.Parkinson (2023) ‘Bowen capacity plan means a power shift from big utilities, but will there be enough wind?’, Renew Economy, November 24. <https://reneweconomy.com.au/bowen-capacity-plan-means-a-power-shift-from-big-utilities-but-will-there-be-enough-wind/>.



If this were to be the case, the debate around environmental additionality of PPAs will grow. In last year's State of the Market report, we observed that the decline of PPAs with new projects was sparking debate about the additionality and impact of Corporate PPAs. Under the RET, additionality was clear as any LGCs retired voluntarily were additional to the mandatory renewable energy liabilities for retailers, but additionality has become more complex since 2020 when the RET was achieved. Legally, additionality is achieved if the green certificates are retired but for many the 'true' meaning of additionality is negotiating a PPA that enables a project to secure finance and adds new capacity. In our *Best Practice* guide, BRC-A has highlighted there is a spectrum of impact from PPAs with new projects through to PPAs with operational projects that play a lesser role but add to demand and improve the financial position of projects across their lifecycle. The strength of the Corporate PPA market can enable projects to proceed with greater confidence knowing there is offtake demand once projects are in commissioning and operational phases. A healthy Corporate PPA market should exhibit a mix of buyer sizes across sectors and PPA models to reflect market segments, stretching from PPAs with larger buyers underwriting new projects, and retailers on-selling PPAs from operating projects to medium-sized buyers. As the CIS scales up, debates around additionality could intensify if the PPA market does become primarily a secondary market for projects after they have secured finance.



Introduction

Under a Corporate Renewable PPA, electricity buyers agree to buy power and/or Large-scale Generation Certificates (LGC) from a renewable energy project (currently solar or wind farms) at a fixed price for a longer duration than standard retail contracts (generally 5-years or longer).

About the Report

The State of the Market 2023 report provides an overview of the Corporate Renewable Power Purchase Agreements sector and its key trends. The report is prepared by the Business Renewables Centre Australia (BRC-A) with input from the Market Advisory Panel.

The purpose of the report is to provide an overview of PPA market trends. The original data in the report is drawn from two primary sources:

- The BRC-A maintains a database of Corporate PPAs based on publicly available information and supplemented through industry contacts.
- An annual survey of corporate buyers, project developers and professional Service Providers in the industry and BRC-A membership.

Qualitative information on market trends is also incorporated from a workshop with the Market Advisory Panel and discussions with market participants.

Please cite as Briggs, C., Nassar, A., McKeon, J & Prendergast, J. (2024) Corporate PPAs in Australia: State of the Market 2023, Business Renewables Centre - Australia.

About the BRC-A

The BRC-A was launched in September 2018, to support and facilitate the growth of Corporate PPAs with funding from the Australian Renewable Energy Agency (ARENA) and the NSW and Victorian Governments, and later the Queensland Government.

The BRC-A is a member-based organisation which helps prepare prospective PPA buyers for market-readiness through in-person and online procurement training (bootcamps and webinars) and a suite of educational resources, and facilitates connections between buyers, developers and professional service providers through an online marketplace and profiles platform.

The BRC-A is a collaboration between Climate-KIC Australia, Institute for Sustainable Futures (University of Technology Sydney) and WWF-Australia. For more information go to businessrenewables.org.au.

As of the end of 2023, BRC-A had 210 members:

TABLE 1: BRC-A MEMBERSHIP

MEMBERSHIP GROUP	QUANTITY
Buyers	158
Developers	19
Service providers	14
Partners/supporters	19
Total	210

For further information see 'BRC-A Activities in 2023'.



Large-Scale Renewable Energy in Australia

Australia is now one of the global leaders in the transition from a coal-dominated electricity system to renewable energy. The share of renewable energy in the National Electricity Market was around 38 per cent for 2023. Under the Renewable Energy Target, In the 2024 Integrated System Plan (ISP), the Australian Energy Market Operator (AEMO) outlines a series of scenarios for energy transition which see the exit of coal-fired power in 2038 and an electricity system dominated by renewable energy from the early-2030s.

However, AEMO also highlights risks to achieving a successful energy transition, including enabling investment to fund 6 gigawatts of new large-scale renewable per annum. Whilst there is a very large pipeline of renewable energy projects at various stages of development, there has been a slowdown in investment, construction and connection of large-scale renewable energy in recent years due to factors such as delays in planning approvals, transmission congestion and inadequate commitments to offtake agreements. Most of the growth in renewable energy has occurred due to the installation of rooftop solar and Corporate PPAs signed by businesses and governments.

In this section, an overview of trends in large-scale renewable energy is provided before examining Corporate PPAs.

Background: The National Electricity Market

Covering around 5,000 kilometres, the NEM is the world's longest interconnected power system stretching from Queensland along the Eastern Seaboard, across the Bass Strait to Tasmania.

The NEM is an 'energy-only' wholesale market in which generators are paid only for the electricity despatched into the grid. The Australian Energy Market Operator (AEMO) matches demand with supply in real time through a centralised despatch process.

Generators submit bids to supply the market every five minutes. AEMO accepts the cheapest bids and moves up the 'bid stack' until supply is sufficient to meet the demand – the last or most expensive bid sets the price for the whole bid stack. The wholesale electricity price can vary from -\$1,000/Megawatt-hour (MWh) to a market cap of \$15,500/MWh. Each state has its own wholesale electricity price.

For more information on how the National Electricity Market works, consult [this introduction by AEMO](#).

The Slowdown in Renewable Energy Investment

The installation of large-scale renewable energy has slowed significantly after the rapid growth to achieve the Renewable Energy Target. Strong growth in new solar and wind farms occurred from 2017 – 2021, reflecting PPAs signed by retailers to meet commitments under the RET and the growing Corporate PPA market.

However, there has been a slowdown in new investment in solar and wind farms due to a combination of factors including:

- Lower interest amongst major electricity retailers following the achievement of the 2020 RET;
- Grid connection issues which have led to delays and increased risks for new projects;
- Global supply-chain inflation and emerging skill shortages have increased project costs;³
- Increased financing costs due to rising interest rates and risk premiums.

3 Bloomberg New Energy Finance estimates the global cost of onshore wind increased 7 per cent and solar 14 per cent during 2022 due to supply-chain factors. See Bloomberg New Energy Finance (2022) 'Cost of New Renewables Temporarily Rises as Inflation Starts to Bite', <https://about.bnef.com/blog/cost-of-new-renewables-temporarily-rises-as-inflation-starts-to-bite/>.

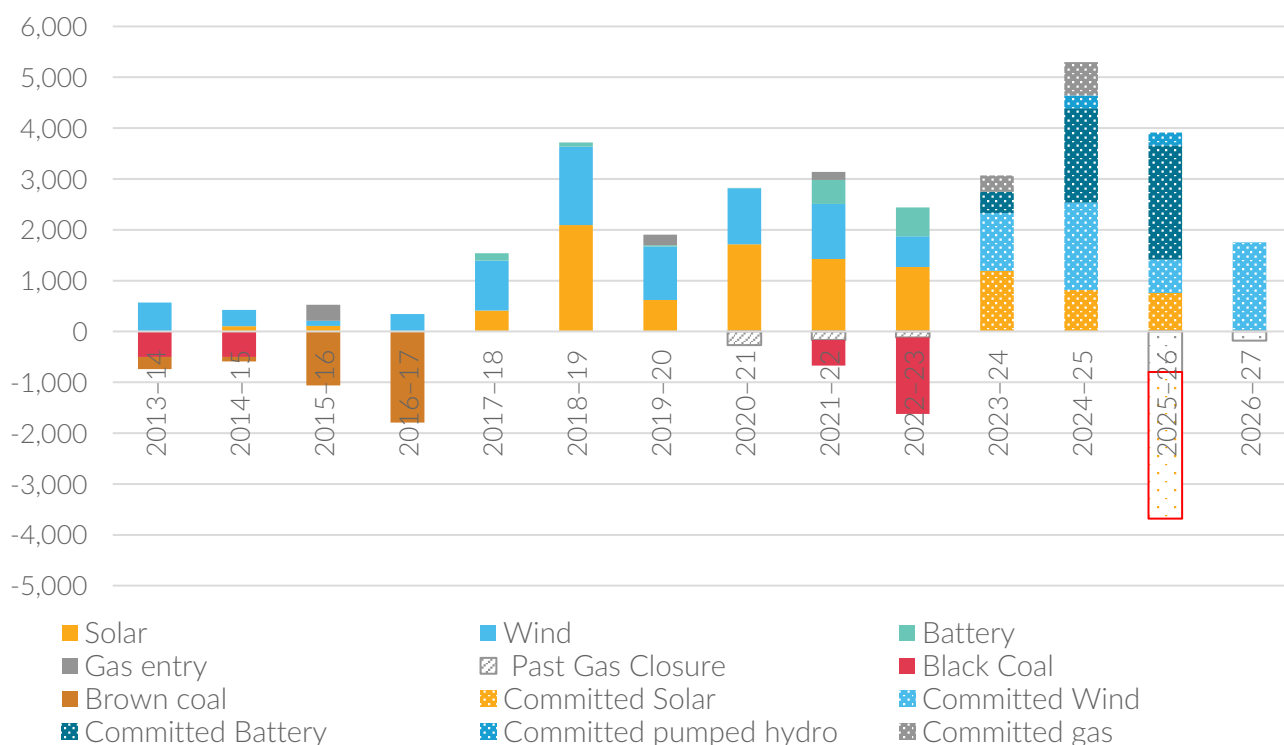


FIGURE 1: NEW AND EXISTING GENERATION CAPACITY, THE NATIONAL ELECTRICITY MARKET (MW)⁴

There is a large pipeline of renewable energy projects

The Australian Energy Market Operator’s (AEMO) project pipeline illustrates that there remains an enormous volume of renewable energy projects under development.

Based on AEMO’s generator information, there is over 40 GW of solar, almost 70 GW of wind and almost 40 GW of battery storage projects proposed. Only a small proportion of projects in the pipeline have secured finance: there is a large number of projects seeking a power purchase agreement to proceed.

4 Australian Energy Regulator, State of the Energy Market 2023, https://www.aer.gov.au/system/files/2023-10/State%20of%20the%20energy%20market%202023%20-%20Full%20report_1.pdf

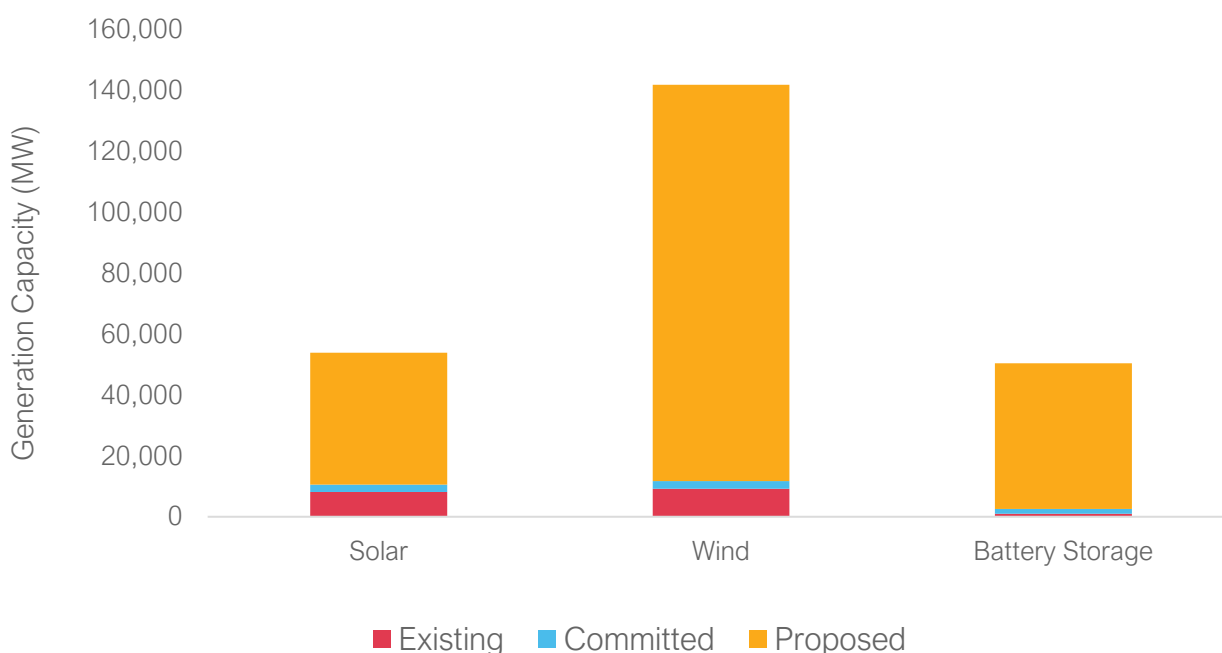


FIGURE 2: LARGE-SCALE RENEWABLE ENERGY PROJECT PIPELINE (MW)⁵

New policy and programs are emerging for large-scale renewable energy

Since the election of the Labor Government, there have been a series of major policy and program developments at Federal and State level such as Rewiring the Nation to accelerate transmission construction. In the draft 2024 Integrated Systems Plan, AEMO has continued to highlight that increased investment certainty is required to enable the rapid, large-scale investment in renewable energy required to transition the National Electricity Market.

For large-scale renewable energy procurement, there are major programs in Federal and State jurisdictions. At a state level, New South Wales (Electricity Infrastructure Investment Roadmap), Victoria (Victorian Renewable Energy Target) and Queensland (Energy and Jobs Plan) continued to implement transition programs. The major development at the Federal level in 2023 was the announcement of the Capacity Investment Scheme. Reverse auctions will be undertaken in partnership between the Federal and State Government to support \$10 billion of investment in renewable energy generation supported by batteries, pumped hydro and other long-duration storage. The implications of the CIS for Corporate PPAs are considered later in the report.

The implementation of these policies would broadly align Australia with the 'Step Change' scenario in AEMO's ISP. Under the Step Change scenario, renewable energy would account for 83 per cent of electricity generation by 2030 and most coal-fired power stations would retire by the early to mid 2030s.

⁵ Australian Energy Market Operator, NEM Generation Information 2023, <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>



What is a Corporate PPA?

A Corporate PPA is an agreement between an entity that owns and operates a wind or solar farm and an organisation that purchases the power and/or environmental attributes generated by the plant.

The typical Corporate PPA was initially a **Wholesale PPA** – a financial Contract-for-Difference entirely separate from a typical retail electricity bill. In a Wholesale arrangement, the off-taker (buyer) pays a fixed price per megawatt-hour (MWh) of electricity to the solar or wind farm (usually with an annual escalation factor); in exchange, they receive the revenue from the electricity sold in the wholesale electricity market and usually the green certificates (LGCs). Typically, these are long-term deals lasting 10 or more years.

However, **Retail PPAs** and models for buying renewable energy have become an established part of the market. In a Retail PPA, the buyer pays for electricity and/or LGCs from a solar or wind farm through the retailer's contract with the project; that is, the buyer is not a direct party to the PPA between the project and retailer. There is a contracted price for the output from the solar and wind farm and contracted price(s) for the electricity supplied by the retailer when the solar or wind farm is not generating. There are also hybrid PPAs whereby a retailer 'sleeves' the Wholesale PPA inside a retail agreement.

The growth of retail PPAs has brought an influx of smaller, mid-sized buyers (1-2 GWh p.a. to 30 GWh p.a.) drawn into the off-site renewable energy market. Retailers have further responded by providing a growing variety of deal structures, pricing models and term lengths such as:

- **LGC-only:** the buyer purchases only the LGC certificates e.g. government and infrastructure projects with existing supply contracts may use LGC-only PPAs.
- **Long-term (7-10-years) PPAs from a portfolio of operating projects:** PPAs directly linked to or sourced from a group of renewable projects.
- **Short-term (3-5 years) PPAs from operating projects:** there has been strong growth in a secondary market for retailers on-selling capacity from operating projects to renewable energy buyers.

For more information on deal structures, see the BRC-A's guide to Corporate PPA Deal Structures in our Resource Library.



The Growth of Corporate Renewable PPAs in Australia

Corporate Renewable PPAs are an important source of investment in the large-scale renewable energy market. There are different ways of measuring the impact of Corporate PPAs and renewable energy procurement:

- Capacity contracted: the volume of capacity contracted by the PPA;
- Project capacity supported: most PPAs only buy some of the capacity of the project but contribute towards the project securing finance for construction. If, for example, a buyer commits to buy 40MW for a 100MW project, 40MW is allocated to capacity contracted and 100MW to project capacity supported;
- Renewable energy purchased (Gigawatt-hours): whereas the first two metrics measure the capacity of infrastructure supported, buyers are contracting for a volume of electricity to meet organisational requirements and reduce emissions.

As of the end of December 2023, there have been 172 publicly confirmed corporate renewable PPAs in Australia which have contracted more than 7.7 GW of renewable electricity and enabled or supported roughly 15 GW of project capacity.



FIGURE 3: SUMMARY STATISTICS, BRC-A PPA DATABASE, 2023

A record year for Corporate Renewable PPAs

For the second year running, a new record for the contracted volume under Corporate Renewable PPA deals was set in 2023; just over 1700 MW, eclipsing the previous high of 1500 MW (2022). This represents the fourth year in a row where deal volumes have been over 1 GW.

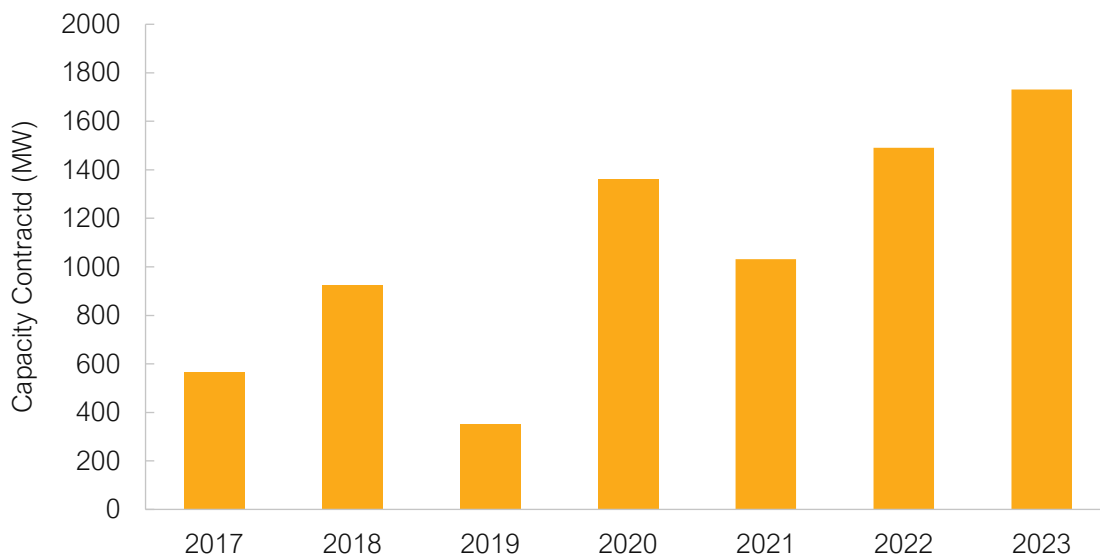


FIGURE 4: CORPORATE PPAS, CAPACITY CONTRACTED (MW)

Deal volumes were mostly quite consistent across 2023 - around 500MW per quarter - with the exception of July-August when there was only 1 PPA announced.

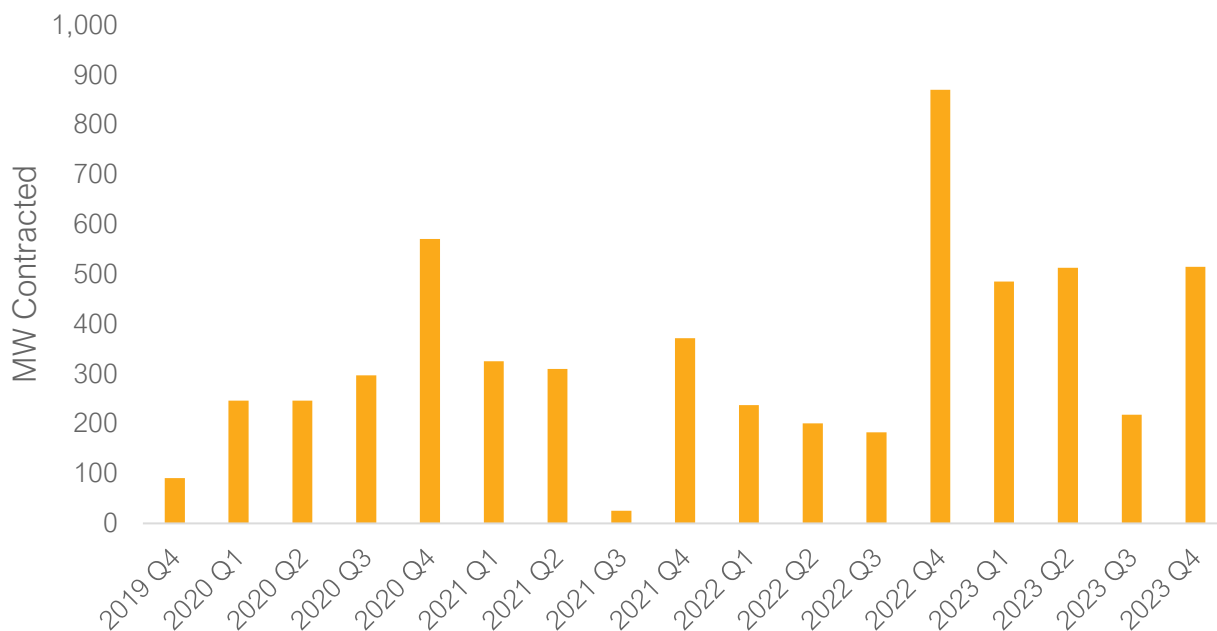


FIGURE 5: QUARTERLY CORPORATE PPAS, VOLUME OF CONTRACTS



There were several key segments to PPA deal-making in 2023

The key buyer segments in the Corporate PPA market were experienced corporates, public and community sector organisations and some new entrant corporates.

EXPERIENCED CORPORATES

Many of the deals were signed by high-profile corporates that had already signed PPAs and were completing further transactions towards net zero targets including:

- BHP: 6th PPA (203 MW, MacIntyre Wind Farm, Western Downs Green Power Hub & Kaban Wind Farm & storage, Qld)
- Ikea: 1st PPA (195 MW, Golden Plains Wind Farm, Vic), 2nd PPA (13 MW, Peak Hill & Trundle Solar Farms, NSW) and 3rd PPA (152 MW, Tilbuster Solar Farm, NSW).
- Telstra: 5th PPA (60 MW, Munna Creek Solar Farm, Qld) and 6th PPA (70 MW, Bundaberg Solar Farm, Qld)
- Woolworths: 3rd PPA (Bango WF (205 MW, Bango Wind Farm and Darlington Point Solar Farm, NSW).
- NBN: 2nd (29 MW, Macarthur Wind Farm Wind, Vic) and 3rd PPA (27 MW, Munna Creek Solar Farm, QLD).
- Lion Brewery: 2nd PPA (71 MW, Woolooga Solar Farm, QLD).

Together, these PPAs accounted for almost 1.1 GW. In what was frequently described by participants as a challenging market, it is unlikely to be a coincidence that much of the deal activity was concentrated in large corporates with experience and expertise in PPAs.

PUBLIC SECTOR AND COMMUNITY ORGANISATIONS

Local government continued to be a strong presence, including multiple PPAs signed by buyer groups:

- Southern NSW Councils: a 32 MW with Metz solar farm, Armidale signed by 7 councils.
- West Australian Local Government Association: a 130 MW PPA signed by 41 councils with Collgar Wind Farm.
- Western Sydney Regional Organisation of Councils: 11 councils signed a PPA with Collector wind farm (NSW).

Kiama and Shellharbour Council, Blue Mountains Council, Cumberland Council, Baptistcare, Newcastle Airport and Taronga Zoo also signed PPAs during 2023.

NEW ENTRANT CORPORATES

There were also some new entrant corporates - many of whom are well-known - including:

- Arnotts: 21 MW, Portfolio, Qld.
- Boral: 29 MW, Wellington Solar Farm & Wellington North Solar Farm, NSW.
- Asahi: 15 MW, Clermont Solar Farm, Qld.
- Optus 60 MW, Portfolio, Multi-state.
- CSL: 37 MW, Macarthur Wind Farm Wind, Vic.

There were also two new entrants from the resource sector:

- Fortescue Metals: a 338 MW PPA with Bulli solar farm and battery storage to supply a new hydrogen facility.
- Bellevue Gold: an off-grid PPA signed with Zenith Energy for 80 per cent of energy to be supplied from solar, wind and battery storage supplemented by gas generation.



For the second year running, Queensland was the leading state for Corporate PPAs

From 2020, Corporate PPA uptake accelerated in Queensland, with deals being negotiated in tandem or off the back of PPAs signed by CleanCo and Stanwell. Queensland has led the pack in both 2022 and 2023 – and has overtaken NSW as the leading state for Corporate PPAs.

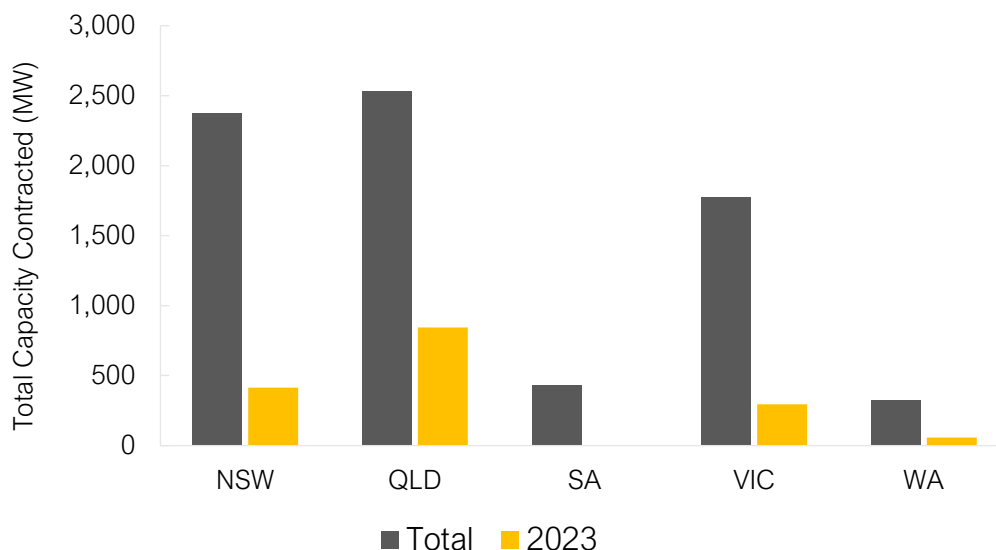


FIGURE 6: CORPORATE PPAS BY STATE (MW)

Across the market ups and downs, there is largely continuity in the drivers for interest in Corporate PPAs

In the aftermath of unprecedented volatility in the wholesale electricity market last year, prices have largely stabilised to levels before the 2022 market crisis.

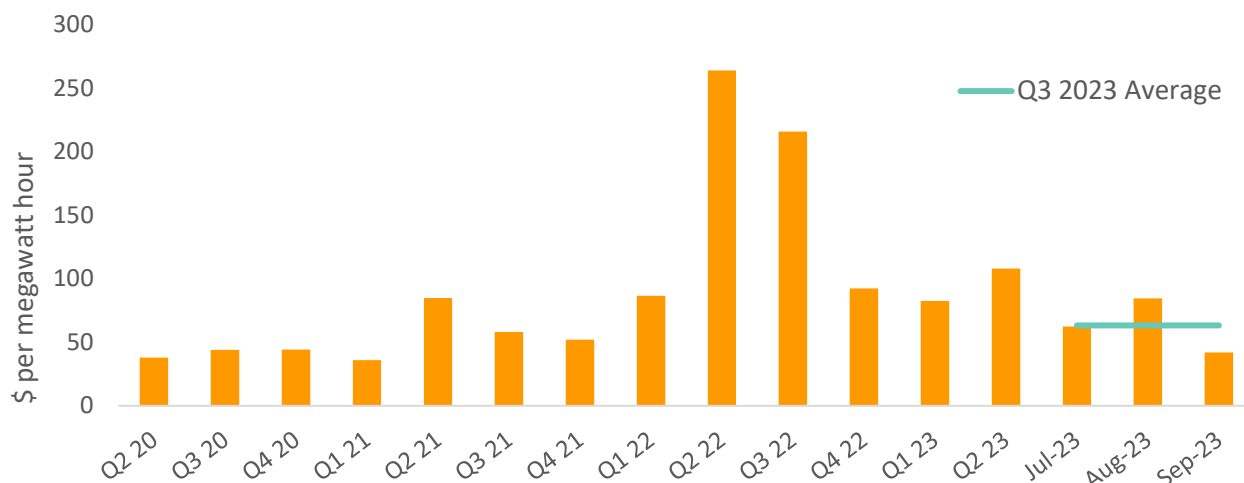


FIGURE 7: NEM AVERAGE WHOLESALE PRICES, QUARTERLY.⁶

⁶ AEMO, Energy Dynamics, Q3 2023.



In the past two years, BRC-A asked PPA buyers, developers and service providers about the impact of the market volatility on demand for Corporate PPAs. Whereas respondents last year were evenly split as to whether the impact had been positive or negative, very few buyers this year considered there had been a negative impact. Most respondents felt there had been no impact or a positive impact on buyer demand for PPAs.

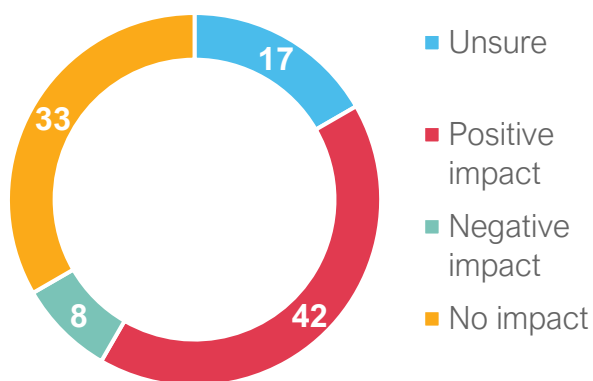


FIGURE 8: IMPACT OF MARKET VOLATILITY ON CORPORATE PPA BUYER DEMAND – BUYERS (%)

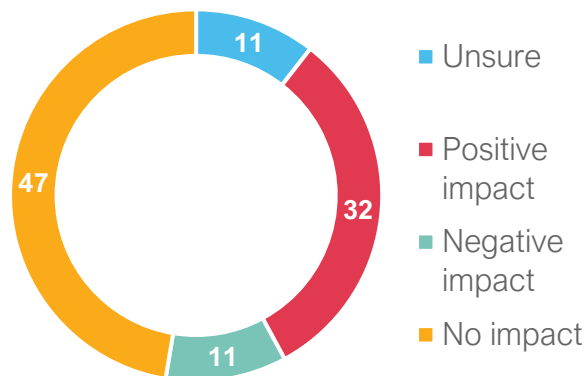


FIGURE 9: IMPACT OF MARKET VOLATILITY ON CORPORATE PPA BUYER DEMAND – SERVICE PROVIDERS (%)

Indeed, the continuity in the drivers for interest in Corporate PPAs is striking. For three years running, almost two-thirds of buyers in the BRC-A survey nominated non-price drivers as the primary motivating factor for their interest in PPAs. Lower electricity prices and price certainty were nominated by just under 20 per cent of buyers. In practice, buyers consider a mix of financial and sustainability issues but the primary drivers for interest are sustainability, greenhouse targets and CSR goals.

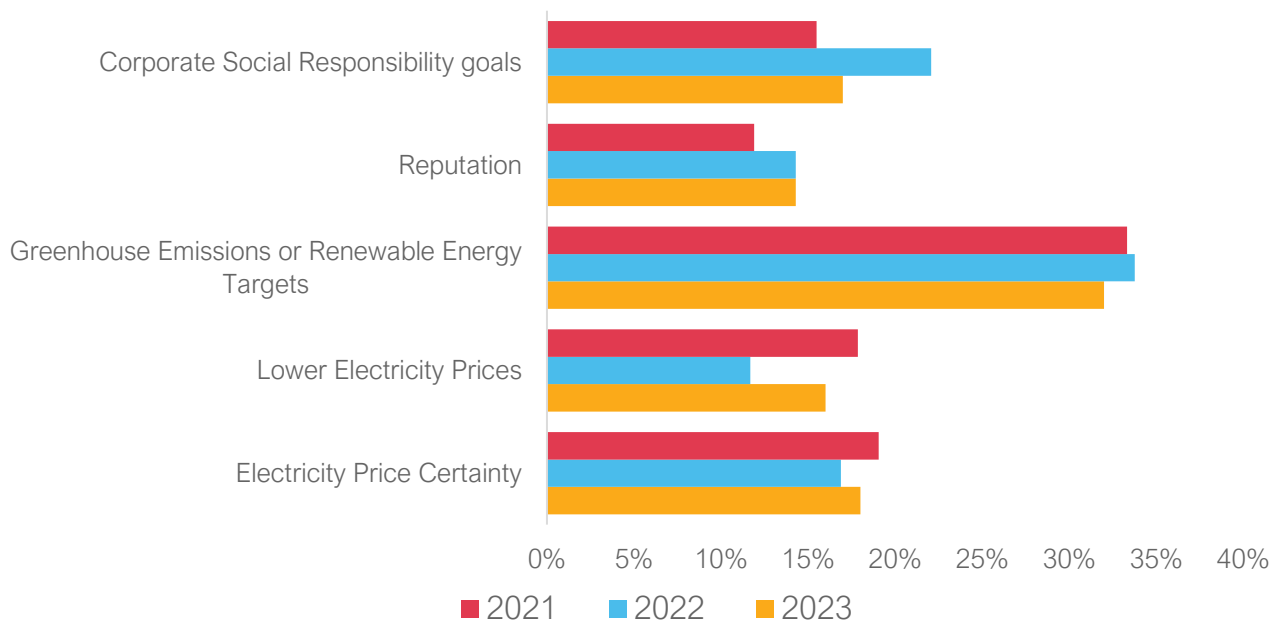


FIGURE 10: WHAT IS THE PRIMARY DRIVER FOR YOUR INTEREST IN CORPORATE RENEWABLE PPAS?



There was an increased concentration of deals with Larger Buyers

In past years, there has been a high diversity of deal sizes. However, there were fewer small deals and a significant increase in the larger deals during 2023. The proportion of deals under 20 MW has reduced over the past couple of years from around one-half to one-third of deals (Figure 11).

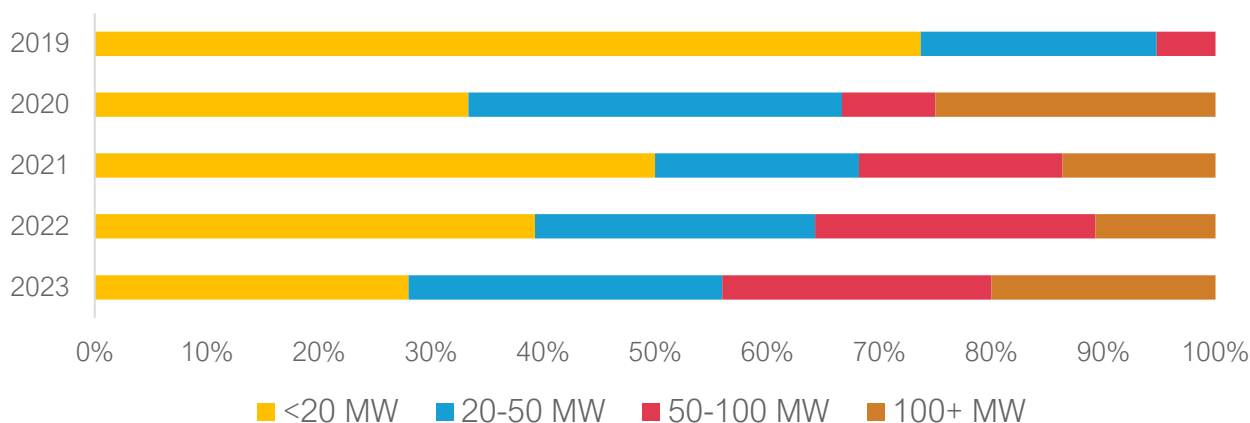


FIGURE 11: CORPORATE PPAS, SEGMENTS BY SIZE (% OF DEALS)

The shift in concentration towards larger deals and buyers is especially pronounced looking at the distribution of capacity between deal sizes (Figure 12).

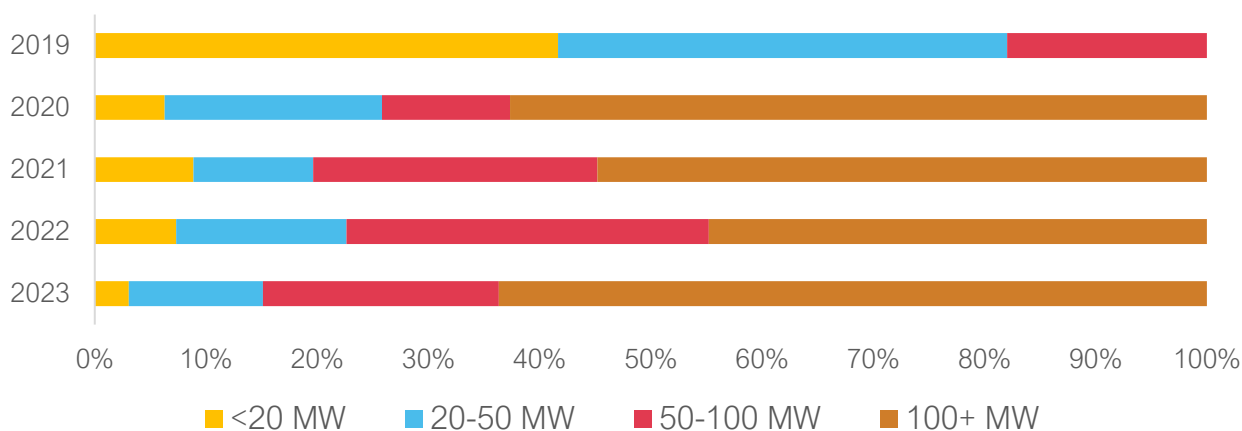


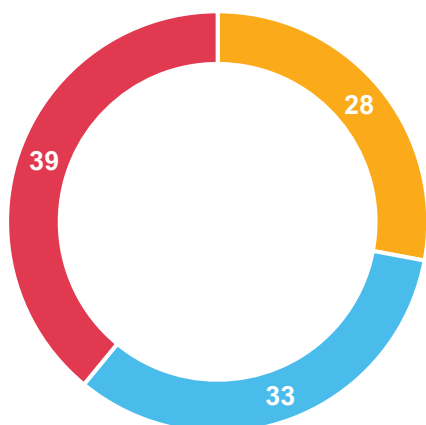
FIGURE 12: CORPORATE PPAS, SEGMENTS BY SIZE (% OF CAPACITY)

The demand amongst smaller buyers remains strong (especially public sector and private services with ESG or sustainability targets) but the slowdown in construction of solar and wind farms has translated into less supply of operational projects for this market segment. Once supply improves so an increase in PPAs with smaller buyers is likely to occur.



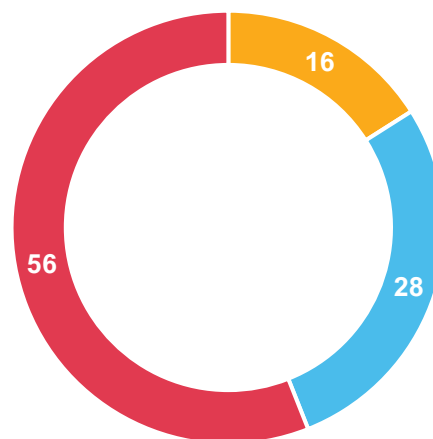
Corporate PPAs with new projects increased modestly but remain low

In the past three years, the volume of Corporate PPAs with new projects has declined markedly. In 2022, the volume of deals with new projects hit a low (just over 20 per cent) which mostly comprised one large PPA by Microsoft. This year, there was a modest recovery with a market quite evenly split between PPAs with new projects (28 per cent), projects which had secured finance but not yet completed (33 per cent) and operational projects (39 per cent).



■ New ■ Committed ■ Operating

FIGURE 13: MW CAPACITY OF CORPORATE PPAS, PROJECT STAGE, 2023 (%)



■ New ■ Committed ■ Operating

FIGURE 14: VOLUME OF CORPORATE PPAS, PROJECT STAGE, 2023 (%)

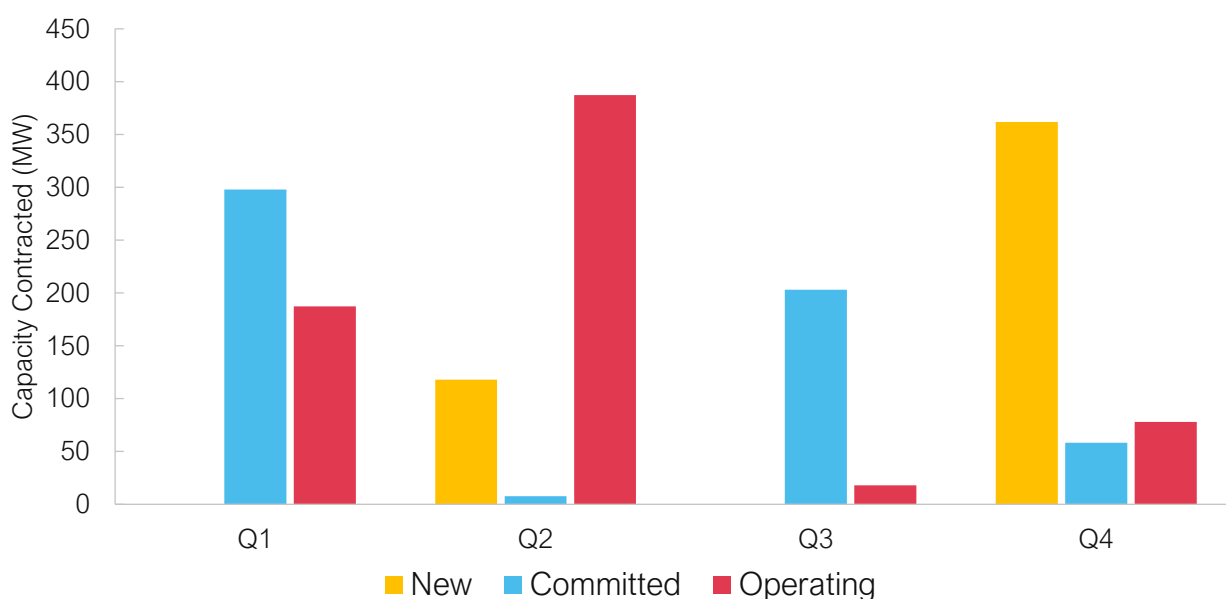


FIGURE 15: CORPORATE PPAS 2023 (MW), PROJECT STAGE, BY QUARTER



There was a notable surge in PPAs with operating projects in Q2 ahead of the end of the financial year.

As with last year, a single large PPA signed by Fortescue Metals late in the year accounted for most of the new capacity (338 MW) with NBN (60 MW), Telstra (58 MW) and Bellevue Gold (24 MW) also signing PPAs with new projects.

Nonetheless, for the third year running, the volume of Corporate PPAs with new projects have been modest.

The market is evenly split between Wholesale and Retail PPAs

Whereas there had been a strong trend towards retail PPAs, in the past couple of years wholesale PPAs have become more common again. Where larger buyers had preferred wholesale PPAs in earlier years they too swung to retail PPAs in 2021 which appeared to reflect more attractive pricing, lower firming costs and simpler administration. However, the costs of firming through retail PPAs rose amidst the market volatility and risk premiums. Consequently, after making something of a comeback in 2022, the market was relatively evenly split in 2023.

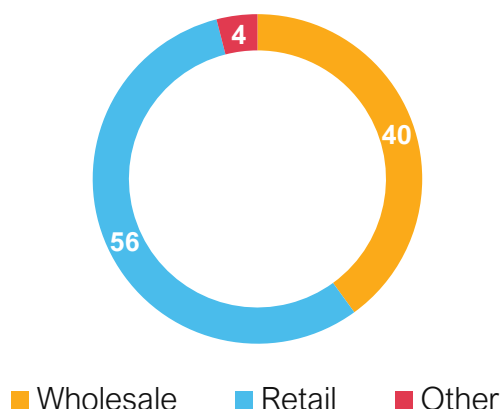


FIGURE 16: WHOLESAL & RETAIL PPAS, NUMBER OF DEALS, 2023 (%)

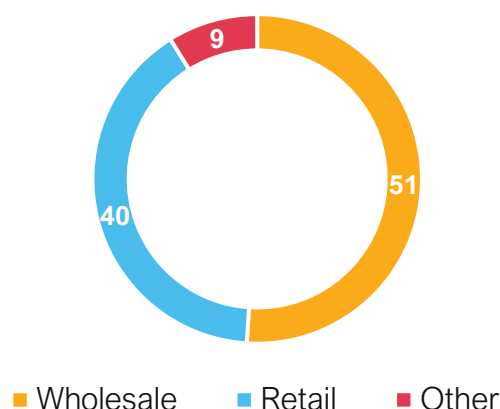


FIGURE 17: WHOLESAL & RETAIL PPAS, MARKET SHARE (MW), 2023 (%)

Market Segments: Growth in Corporate PPAs and the NSW LTESAs

There are five market segments in Australia's large-scale renewable energy market:

- **Utility PPAs:** deals between electricity retailers and renewable energy projects
- **Merchant projects:** solar and wind farms that sell into the wholesale market without a PPA
- **Government PPAs:** auctions by government for renewable energy using general revenue (i.e. not for their own operations)
- **Corporate PPAs:** deals with renewable energy projects by public and private sector buyers for their own operations.
- **State-owned utilities:** since 2020, publicly-owned retailers in Queensland and Snowy Hydro have signed major PPAs so they are now separately represented below to differentiate from utility PPAs signed by private sector retailers.

After the RET mandating renewable energy procurement by retailers was achieved in 2020, utility PPAs slowed dramatically and the market was constituted almost entirely by state-owned utilities and corporate PPAs.

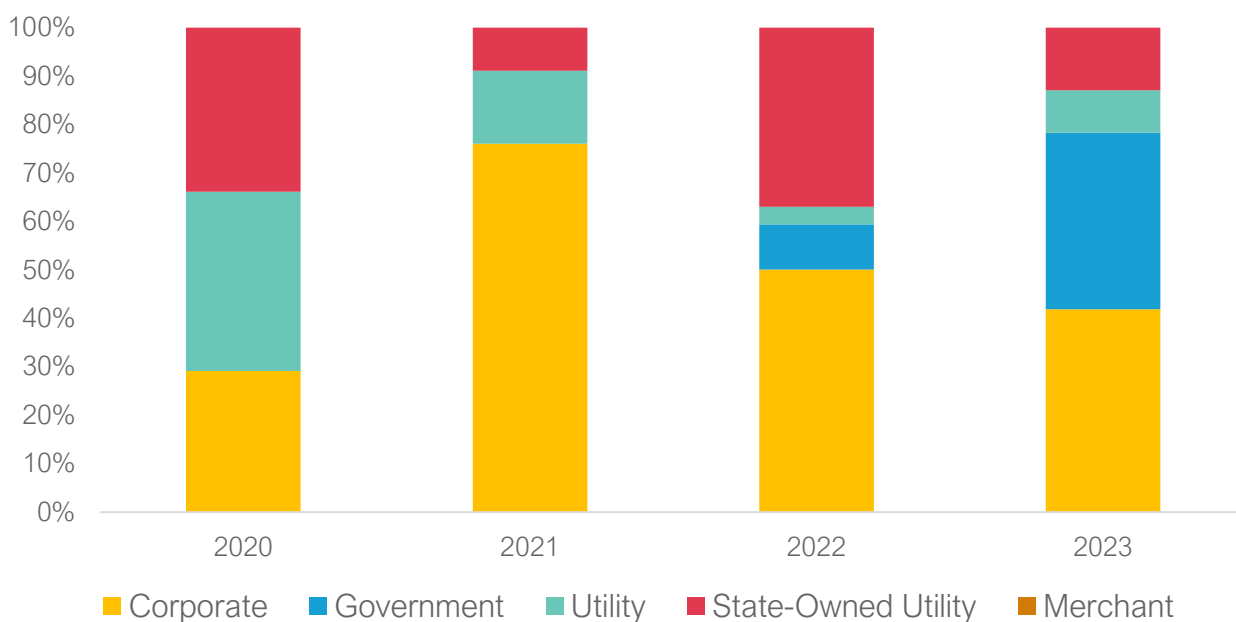


FIGURE 18: PPA MARKET SEGMENTS, 2020-23

Note: the market segments are measured on an annual basis. Sometimes, PPAs change market segment over time. For example, CleanCo has negotiated PPAs with projects (classified as a state-owned utility) and then subsequently on-sold capacity to a corporate buyer (classified as a corporate PPA). The volume of the PPA is not double counted in the capacity estimates, but for the purposes of measuring share between market segments the same capacity will be counted in different years as a different type of PPA when it changes status.

There were several shifts between the market segments during 2023 (Figure 18):

- There was a large increase in the government segment due to the awarding of 9 Long-Term Energy Supply Agreements in NSW in:
 - May (round 1):
 - 1, 395 MW of generation: Stubbo Solar Farm, Coppabella Wind Farm, New England Solar Farm.
 - 50 MW of energy storage: Limondale BESS.
 - November (round 2):
 - 750 megawatts MW of renewable energy generation Unugula wind farm, Cuncairn solar farm.
 - 524 MW of energy storage: Silver City Energy Storage, Goulburn River BESS, Richmond Valley BESS.
- For the first time since 2020, there was a (modest) increase in contracting by private sector retailers
- the volume of Corporate PPAs increased but market share declined due to the scale of capacity contracted through the large-scale LTESAs.

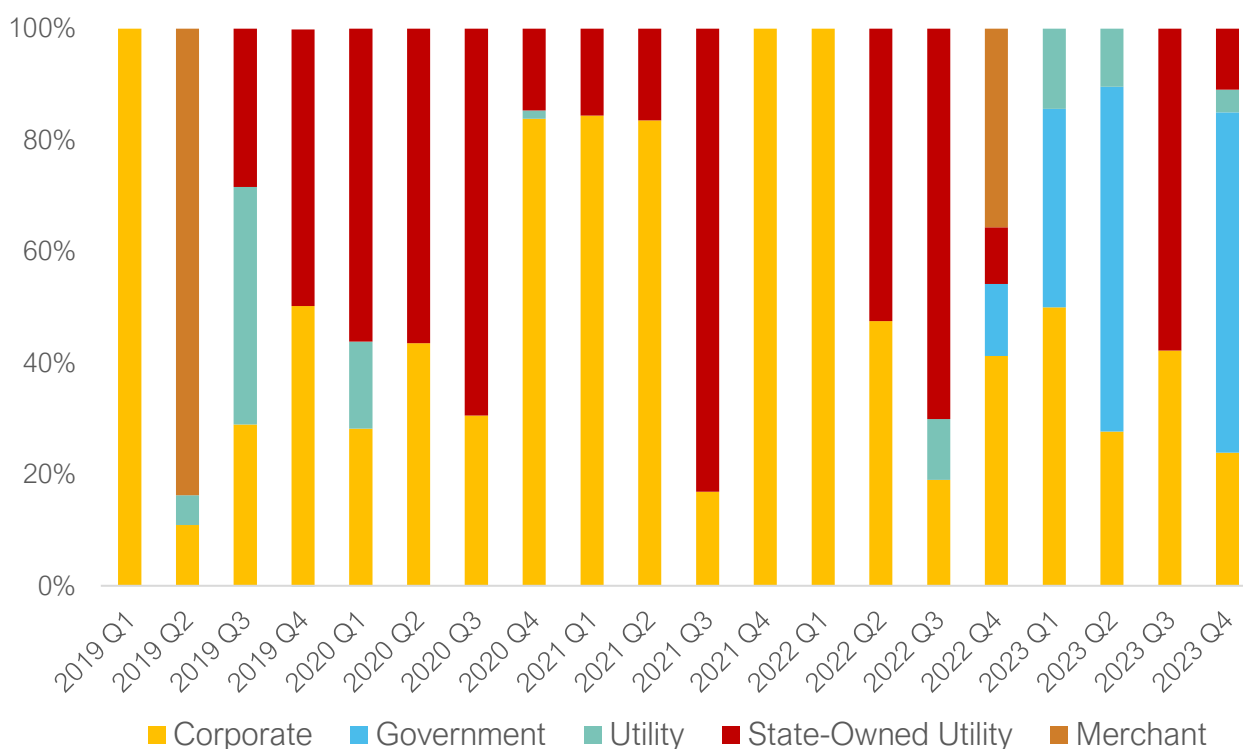


FIGURE 19: PPA MARKET SEGMENTS, 2019-23, QUARTERLY

Note: LTESAs are defined here as ‘government PPAs’. There are some features which distinguish the LTESAs from conventional PPAs (e.g. the design as options contracts) but they are defined here as ‘government PPAs’ as they perform an equivalent role.

Buyer strategies in a high-price LGC market

The market expectation for some years was that the price of LGCs would inevitably fall under \$10 at some point once the mandatory demand for the RET was satisfied. However, the spot price for LGCs has remained high in the past two years. The LGC spot price increased from around \$35-\$40 (2021) to \$55-\$60 (2022) and has bounced between a low of \$42.50 to a high of \$58.50 across 2023. LGC prices negotiated directly between parties outside the brokered market including PPAs are not publicly known but industry sources note prices are significantly lower. The on-going strength of LGC prices reflects some of the wider trends in the renewable energy market (e.g. delays in grid connections have reduced the expected supply of LGCs), but also the demand from organisations voluntarily retiring LGCs for environmental claims and emissions commitments.

For the first time in 2023, BRC-A surveyed advisers and buyers to understand how buyers are approaching LGCs. Buyers face a choice on what to do with the LGCs. If they are ‘retired’ with the Clean Energy Regulator to claim the emissions reductions, there is an opportunity cost from the foregone revenue which could be made from selling the LGCs. Market participants reported that some parties are postponing retirement of LGCs until the year of their emissions reduction commitments (e.g. 2025). In this year’s survey, we asked buyers and advisers for the first time about their strategies for managing LGCs. Most buyers are retiring the LGCs but a significant minority (around 20-25%) are selling LGCs now and intending to retire at a later day.

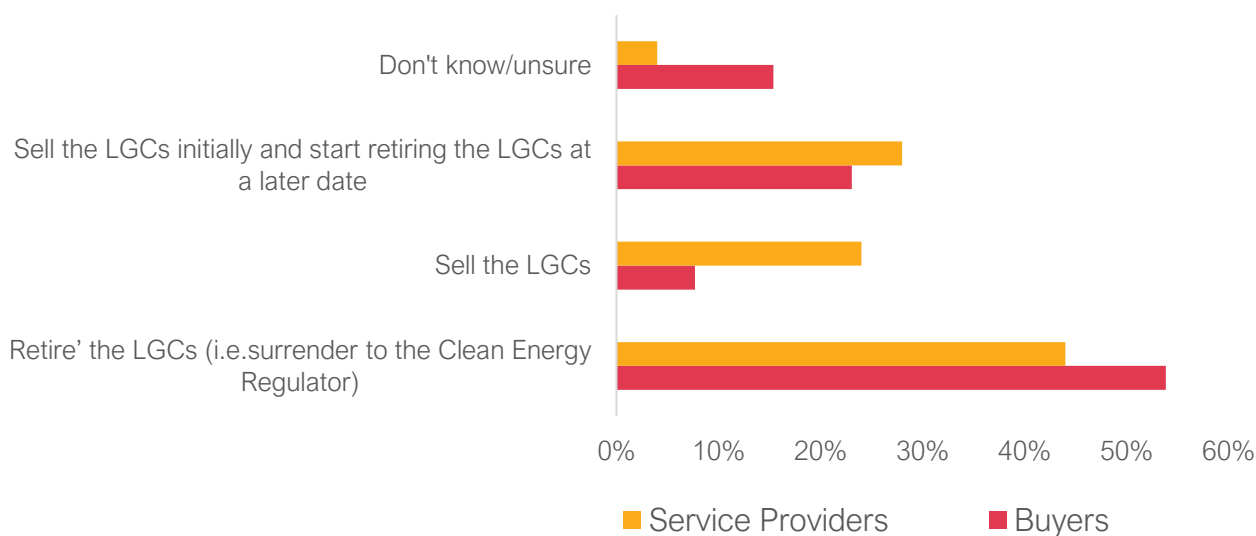


FIGURE 20: LGC STRATEGIES, 2023 (%)

Whilst there has been some uncertainty about the future of green certificates beyond 2030 when the RET finishes and impacts on prices and availability, advisers report that it has become increasingly standard to negotiate clauses that ensure buyers retain rights to any green products and the Federal Government is now consulting on a replacement certificate from 2030 – the Renewable Energy Guarantee of Origin, or REGOs.

PPAs and Firming

For the first, the BRC-A annual survey also asked how often 'firming' was a component within PPAs.

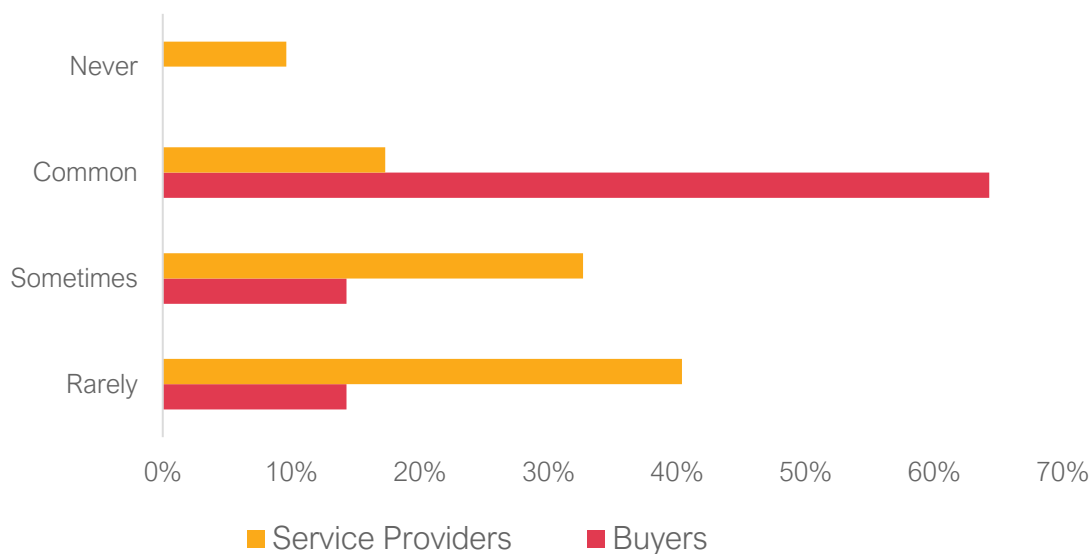


FIGURE 21: FIRMIING FREQUENCY IN PPAS, 2023 (%)

Note: the question asked was 'How often do PPAs, on which you have signed, include a project solution to firming (e.g. use of battery storage)?'

From the survey, it would appear that advisers are now grappling with models to integrate firming but it is still rare for buyers. This may change soon, especially for larger industrial buyers. BHP, for example, negotiated a PPA with CleanCo in Queensland that incorporated 4 wind farms, access to excess renewable energy stored at the Wivenhoe pumped storage facility and a battery at Western Greens Power Hub.



Buyer sectoral composition remains diverse

One of the key features of the PPA market continues to be the diversity of sectors. Whilst there are some sectors that are more active than others (e.g. Local Government, manufacturing, councils, universities), the outstanding feature continues to be the broad spread of sectors where Corporate renewable PPAs are being made.

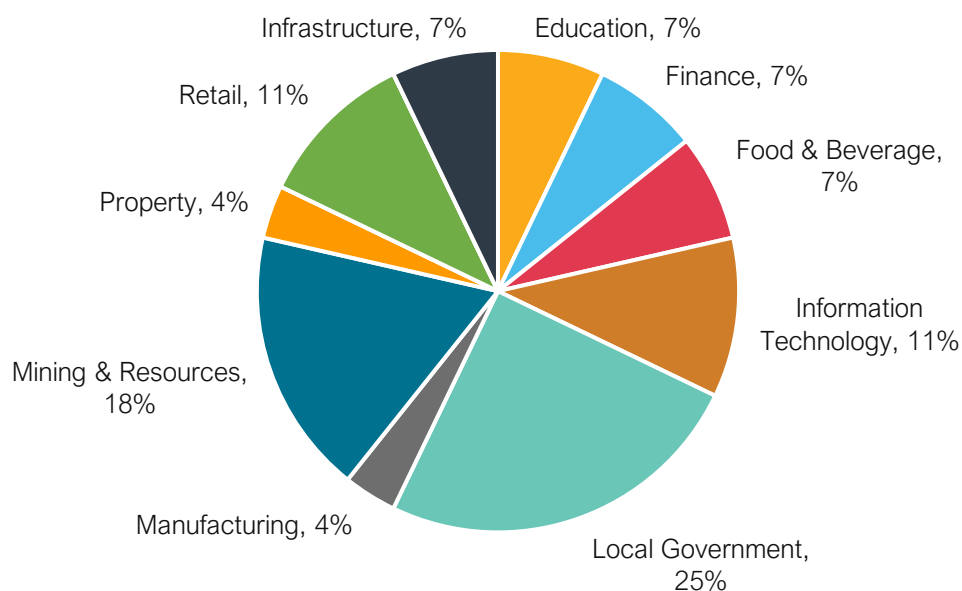


FIGURE 22: NUMBER OF CORPORATE PPAS BY SECTOR, 2023 (%)

A new phase for Corporate PPAs? the Impact of the REZs and the Capacity Investment Scheme

The Corporate PPA market continues to evolve and reflect the wider dynamics of the energy transition. Broadly, there have been two major phases in the development of Corporate PPAs;

- Phase One (2016-19): Corporate PPAs were primarily developed by large corporates to leverage greater value and impact and some pioneers in the public sector. Large corporates, following on the breakthroughs in the US, negotiated wholesale PPAs directly with new projects.
- Phase Two: (2019 -): an influx of retailers broadened the market to a wider diversity of buyer types and sizes via de-risked PPAs with operational projects brokered by retailers Corporate PPAs (partly) filled the void after the achievement of the RET and the market expanded. As more and more organisations have committed to climate or sustainability targets, a vibrant market has developed encompassing most sectors of the Australian economy and a mix of deal types and options for projects across the lifecycle from pre financial close, construction through to operational phase.
- Throughout the development of Corporate PPAs, there has been a view in some circles that Corporate PPAs are a passing trend that will decline once the major retailers or governments seriously return to contracting with large-scale renewable energy projects. That view will be tested now as Corporate PPAs may be entering a third-phase: the end is approaching for the fleet of coal generators, the post-RET policy architecture is being established through the Capacity Investment Scheme, Renewable Energy Zones and a new green certificate regime (Renewable Energy Guarantee of Origin, or REGOs) and rapid, large-scale investment is required to achieve policy targets.



The key elements of the post-RET policy architecture have begun to emerge during 2023:

- Each of the three largest states (NSW, Queensland, Victoria) have energy transition plans and are developing REZs as the key sites for new transmission and large-scale renewable energy and storage;
- REGOs: the Federal Government is consulting on a new, voluntary renewable energy certificate regime;
- Late 2023, the Federal Government announced an expansion of the Capacity Investment Scheme (CIS) which has major implications for Corporate PPAs. From April/May 2024, competitive tenders will be held every 6 months until 2027 to contract 23 GW of renewable energy and 9 GW of despatchable resources (e.g. battery storage). Although the scheme design is not yet established, it appears the CIS will be based on the NSW Long-Term Energy Supply Agreement (LTESA) auction model; that is, an options contract including minimum and maximum prices designed to enable projects to secure debt finance rather than a traditional contract-for-difference.

In the draft 2024 Integrated System Plan, AEMO has estimated that in order for Australia to achieve the 2030 target of 82 per cent renewable electricity and to deliver on the 'Step Change' scenario an average of 6 GW of renewable energy needs to be built on average each year. Even then the risk will remain of system impacts from an abrupt closure for one or more coal plants. The big 3 retailers that cover around 75 per cent of Australian electricity consumption will need to contract with a large volume of renewable energy and storage projects in coming years.

What are the implications for Corporate PPAs? Certainly, one scenario is that Corporate PPAs are crowded out as projects focus on bidding for contracts under the CIS instead of Corporate PPAs. This is possible and may well be part of how the market changes, but it is unlikely that Corporate PPAs will fade out in our view. Demand for Corporate PPAs is underpinned by emissions reduction, ESG and reputational drivers that will continue.

However, the CIS in particular will certainly impact on the dynamics of the Corporate PPA market. The experiences of NSW and Queensland provide some indications on the potential implications. In Queensland, state-owned utilities with mandates to sign PPAs have emerged as the dominant entities for contracting with new projects. Most (but not all) corporate PPAs have been retail PPAs signed with solar and wind farms that are in commissioning or operational after one of the state-owned utilities have signed a PPA to underwrite construction. A similar dynamic could emerge as the CIS scales up.

Interestingly, under the NSW LTESA model, tender criteria encourage and reward bidders with alternative contracts such as Corporate PPAs because the aim is not to displace conventional market contracting. One of the weaknesses of earlier government auction processes was they effectively removed projects from the contracting market with impacts of liquidity and generator behaviour. Brad Hopkins (AEMO Services) noted after the announcement of the second round of LTESAs (November 2023):

“Previously, people needed a 15-year PPA with a credit worthy utility in order to get a project built. They’re showing up to our tenders, and they’re saying, we need enough financial support from the LTESAs to pay our debt. But they say we’re happy and we’ve got a five-year contract with a medium sized company or a large corporate or a new entrant retailer. And our equity investors are happy to take the risk that we get another contract in another five years”¹

EnergyCo has not released any information on how common it is for projects to incorporate other contracts such as Corporate PPAs, but the fundamental role is to enable debt finance with other contracts required to deliver equity returns.

There are a number of moving parts as the scheme design is not finalised and outcomes will be dependent on a range of factors such as the strategies of market participants – but it may be that the role and composition of Corporate PPAs changes more than the volume. The scale of investment required adds confidence that offtake demand from Corporate PPA buyers will continue to have a role. Corporate PPAs may be part of bids through

¹ G.Parkinson (2023) 'Bowen capacity plan means a power shift from big utilities, but will there be enough wind?', Renew Economy, November 24. <https://reneweconomy.com.au/bowen-capacity-plan-means-a-power-shift-from-big-utilities-but-will-there-be-enough-wind/>.



the CIS auctions for new projects but remain the minority as in recent years because only larger parties would be attractive to enhance bids for the CIS – and the role of PPAs increasingly centres on revenue certainty through commissioning and operational phases. The shift towards more PPAs signed with commissioned and operating PPAs could be consolidated as the big retailers re-enter the market negotiate deals after securing a contract through the CIS.

If this were to be the case, the debate around environmental additionality of PPAs will grow. In last year's State of the Market report, we observed that the decline of PPAs with new projects sparks debate about the additionality and impact of Corporate PPAs. Under the RET, additionality was clear as any LGCs retired voluntarily were additional to the mandatory renewable energy liabilities for retailers, but additionality has become more complex since 2020 when the RET was achieved. Legally, additionality is achieved if the green certificates are retired but for many the 'true' meaning of additionality is negotiating a PPA that enables a project to secure finance and adds new capacity. In our Best Practice guide, BRC-A has highlighted there is a spectrum of impact from PPAs with new projects through to PPAs with operational projects that play a lesser role but add to demand and improve the financial position of projects across their lifecycle. The strength of the Corporate PPA market can enable projects to proceed with greater confidence knowing there is offtake demand. A healthy Corporate PPA market should exhibit a mix of buyer sizes across sectors and PPA models to reflect market segments, stretching from PPAs with larger buyers underwriting new projects, and retailers on-selling PPAs from operating projects to medium-sized buyers. As the CIS scales up, debates around additionality could become more complex if the PPA market does become primarily a secondary market for projects after they have secured finance.

To support buyers negotiate PPAs with higher environmental impact, the BRC-A has a *Best Practice Guide*.

There are three key principles buyers should consider when assessing PPAs:

- To what extent does it support decarbonisation of the electricity grid?
- To what extent does it support further decarbonisation of the electricity grid by enabling other projects (e.g. matching consumption with supply to minimise grid constraints associated with integrating renewable energy)?
- To what extent does it support environmental and social benefits to build 'social licence' for renewable energy?

Recognising the differences between larger and small/ medium-sized buyers, the guide contains a spectrum of options on what 'best' and 'better practice looks like for different types of buyers to assist in assessing PPA offers.



Understanding Buyers: Preferences and Barriers to Corporate PPAs

The Business Renewables Centre Australia is a 'buyer-facing' organisation that undertakes capacity-building to support buyers make informed decisions about Corporate PPAs. In surveys for the last three years, we asked buyers, developers and service providers about the barriers to and transaction costs of PPAs and preferences and criteria of buyers when making PPAs.

One of the striking features is that the responses of buyers have been relatively consistent across surveys for the past three years.

Key findings include:

- PPAs remain a challenging undertaking with most buyers rating the difficulty high or very high - though transaction costs are generally rated lower than the difficulty.
- the major barriers to PPA execution are internal to buyer organisations: buyer understanding, complexity and building organisational support for PPAs are the key challenges – though more buyers identified market uncertainty as a barrier this year.
- PPAs take time: the most common deal length was 12-18 months and over half of buyers estimated it longer than 18 months.
- Financial risk, price and developer reputation are the most important factors for buyers: for three years these have been the most important factors nominated by buyers when assessing PPAs.
- Community support and benefits, local jobs and environment and biodiversity are less important – but more significant to buyers than developers recognise. Whilst they are not rated as important as the top-line considerations, social and environmental considerations are more important than most developers recognise. Around half of buyers rate social and environmental considerations as very important or important.

Corporate PPAs are still hard to do – but getting somewhat easier

Every year, the BRC-A surveys, buyers on their rating of the difficulty of PPAs easier and transaction costs. Buyers are asked to rate the difficulty on a scale of 1 (easy) – 5 (hard). The proportion of buyers who answer '5' has declined over several years with most of the growth in buyers rating the process as a '3' (Figure 23). Most buyers rank the process as a '4' indicating it is mostly regarded as a hard transaction but there is a trend towards lower ratings.

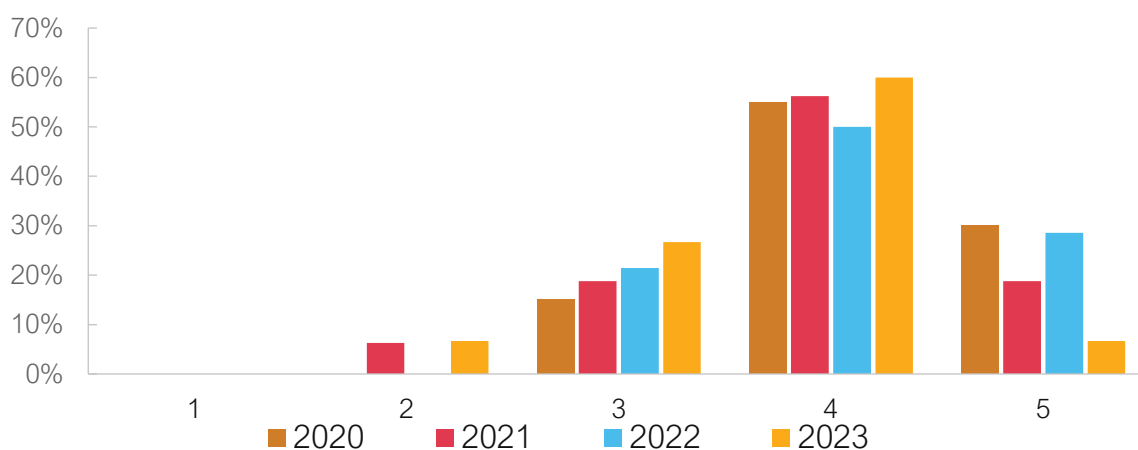


FIGURE 23: HOW HARD ARE CORPORATE PPAS?



When asked about transaction costs, a clear majority of buyers rate the PPA as a '3' which also supports the conclusion PPAs are becoming somewhat easier for buyers (Figure 24).

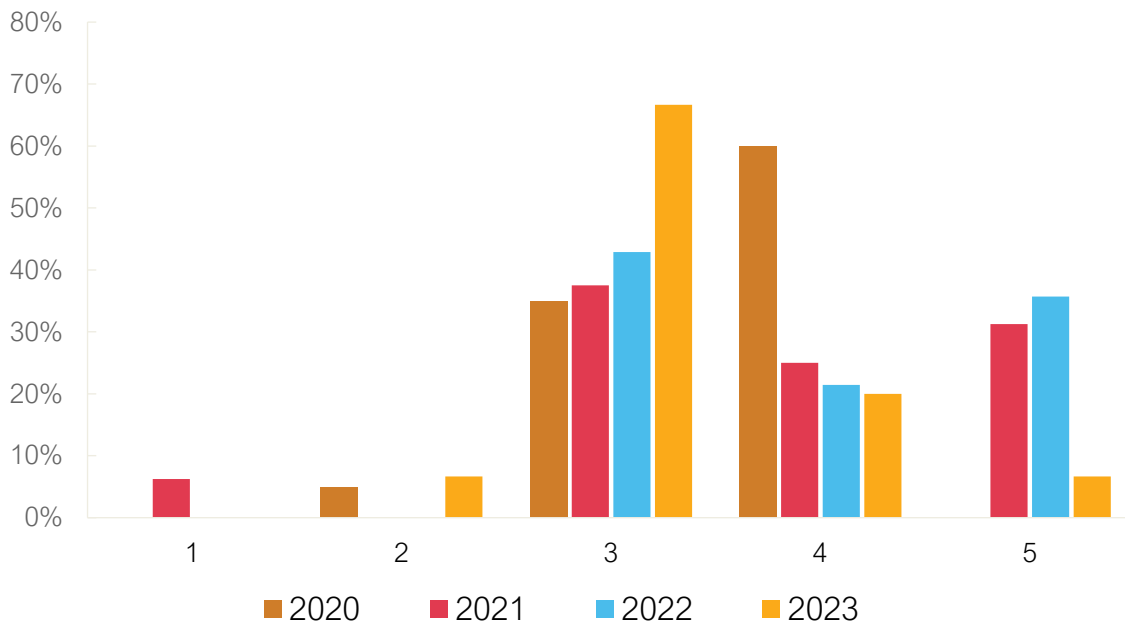


FIGURE 24: BUYER RATINGS OF TRANSACTION COSTS, 2020-23

Likewise, the duration of deals reported by buyers has been falling. Notably fewer deals were reported as taking longer than 18 months (Figure 25).

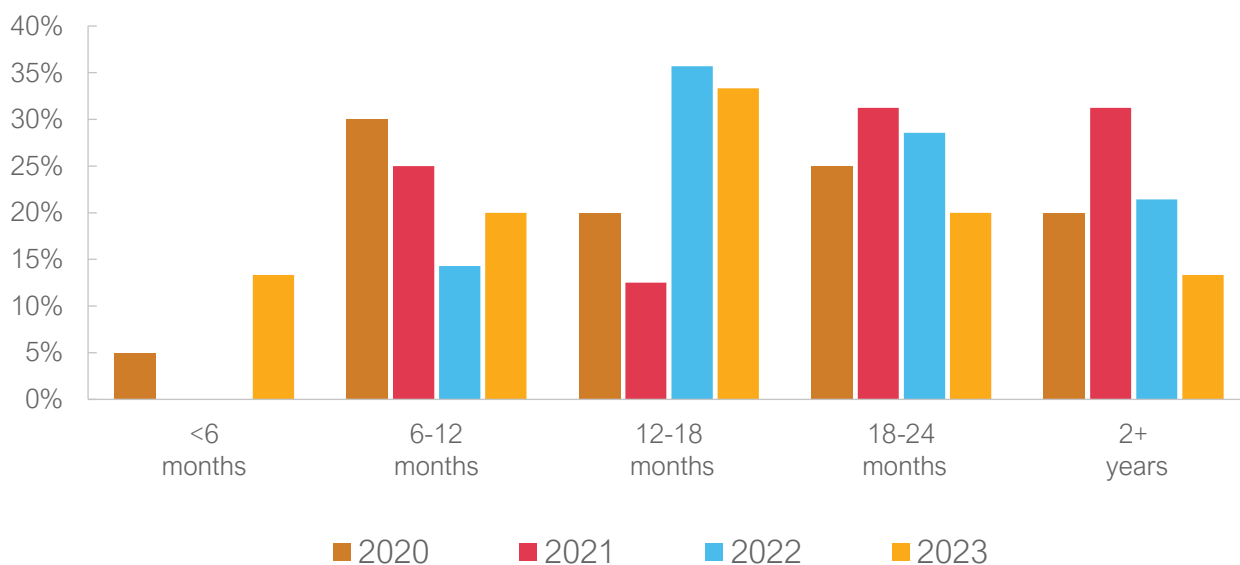


FIGURE 25: CORPORATE PPAs, PROCESS DURATION



The Key Barriers to Corporate PPAs

When asked about the single greatest barrier, building internal organisational support has consistently been the complexity and choosing the right model for the organisation have been the major obstacles identified by buyers. The other factor that has increased in importance is market uncertainty. The diversity of responses in each survey is a notable feature as buyers do not cluster heavily around particular barriers.

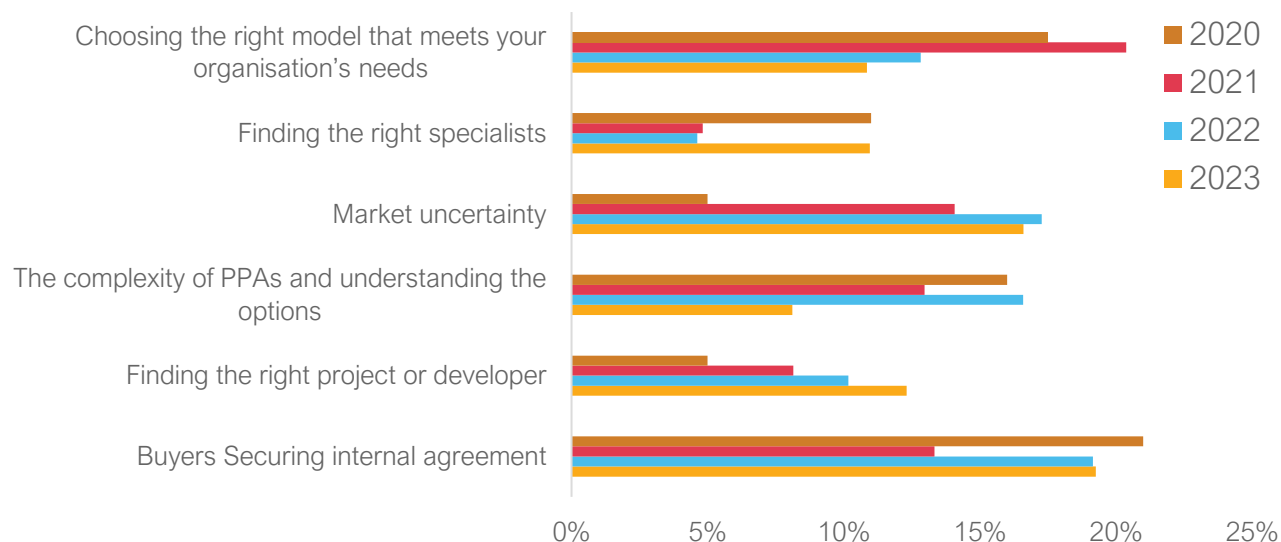


FIGURE 26: WHAT IS THE MAJOR BARRIER TO CORPORATE PPAS?, BUYERS (%)

Buyer Preferences: What matters when Buyers are Evaluating PPAs?

What are the key factors for buyers when procuring PPAs and evaluating different projects? For three years, we have asked buyers, developers and service providers about the preferences of buyers to gain insight into their priorities and differences between the parties. Survey respondents are asked to rank the importance of different criteria on a scale of 1 – 5 when assessing PPAs; specifically, price, financial risks, developer reputation, community benefits, local jobs and environment and biodiversity.

Broadly, there is consistency in the average ratings of buyers across multiple years:

- the top 3 issues based are in order financial risks, price and developer reputation;
- the second tier of issues are environment and biodiversity, community support, community benefits;
- the third tier of issues are local jobs.

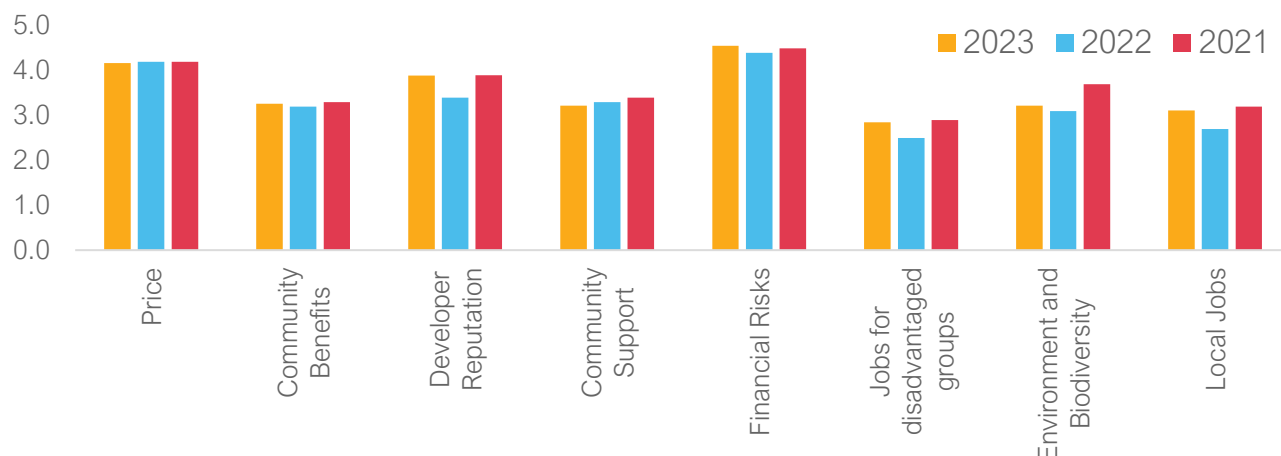


FIGURE 27: KEY FACTORS FOR PPA BUYERS, AVERAGE RATING



Whilst community support, community benefits and environment and biodiversity are on average ranked lower than the headline issues of financial risk, price and developer reputation, there is still a significant minority of buyers that rate these issues as very important. Over the past three years, 40 – 60 per cent of buyers have consistently ranked the social and environmental features as a '5' or a '4' when assessing PPAs (FIGURE 29- Figure 32).

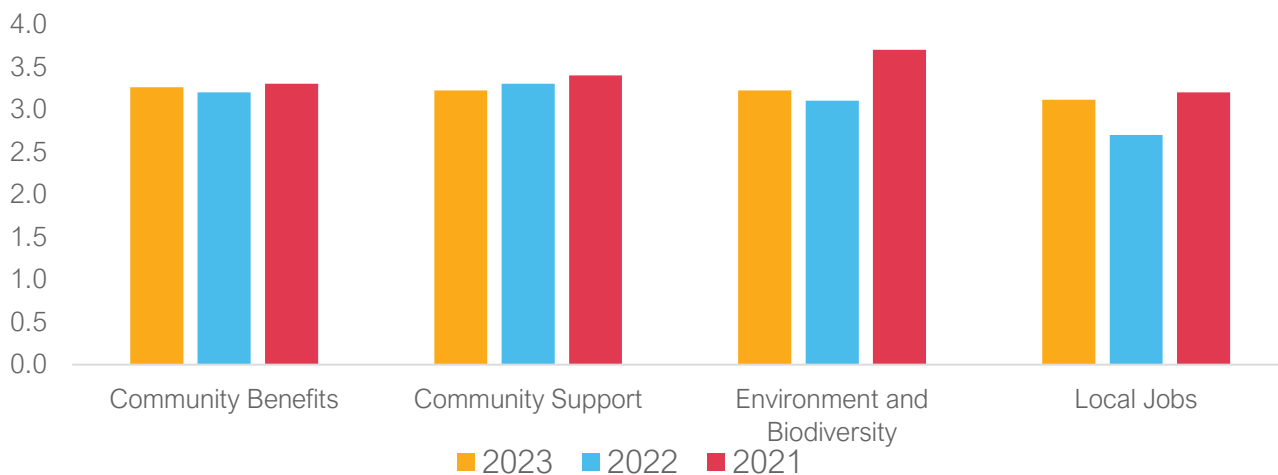


FIGURE 28: AVERAGE BUYER RATINGS ON SOCIAL AND ENVIRONMENTAL ISSUES, BUYERS

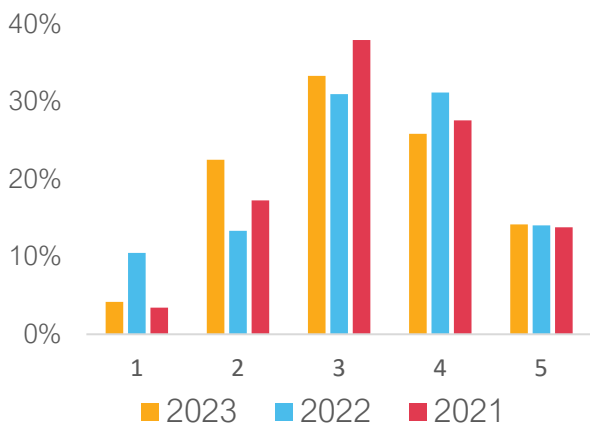


FIGURE 29: RATINGS ON COMMUNITY BENEFITS, BUYERS (%)

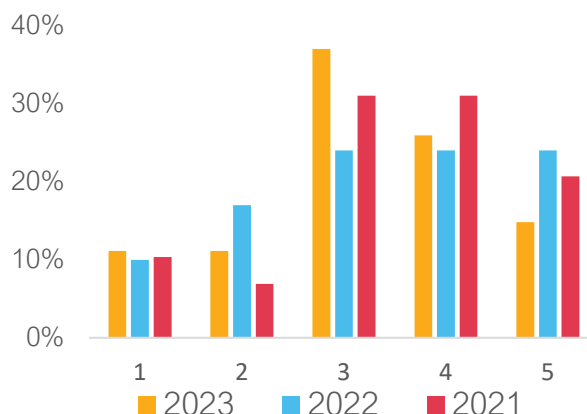


FIGURE 30: RATINGS ON LOCAL COMMUNITY SUPPORT, BUYERS (%)

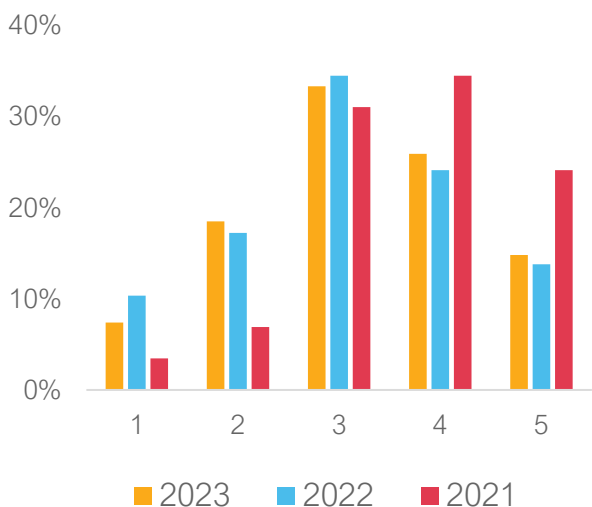


FIGURE 31: RATINGS ON ENVIRONMENT AND BIODIVERSITY, BUYERS (%)

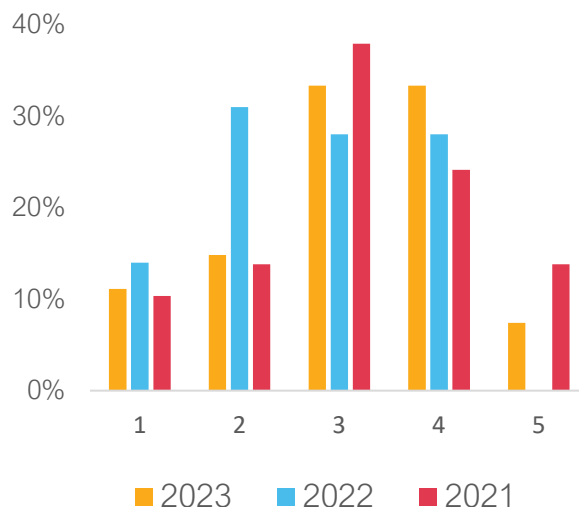


FIGURE 32: RATINGS ON LOCAL JOBS AND INDUSTRY, BUYERS (%)

In most years, we have observed that advisers and service providers ratings of how buyers view different factors are better aligned with the buyer ratings than developers – especially in relation to non-financial benefits which are rated more highly than most developers think.



FIGURE 33: KEY FACTORS FOR PPA BUYERS, BUYER AND SERVICE PROVIDER RATINGS, 2023



Appendix One: BRC-A activities in 2023

The BRC-A was established to support the development of the Corporate PPA market. Established through a licence agreement with the Rocky Mountain Institute's Business Renewables Centre in the United States, the BRC-A is a member-based organisation that provides buyer education and training, develops informational resources (guides, primers, tools, templates), and connects buyers and developers through an online marketplace platform and networking events. The core function of the BRC-A is to help bring build the capacity of PPA buyers, grow the pipeline of buyers who are better informed and able to negotiate PPAs and reduce the transaction costs of Corporate PPAs.

BRC-A impact to date

As Corporate PPAs generally take longer than a year and upwards to negotiate, it takes some time for the impact of an initiative focussed on early-stage buyers to demonstrate impact. However, there are now BRC-A members and buyers coming through 'buyer bootcamps' to negotiate PPAs.

Since launching in October 2018, some of the impacts of the BRC-A include:

- 53 deals signed by BRC-A Members and Buyer Bootcamp attendees contracting 2.2 GW of power supporting 6.8 GW of projects.
- Eight Buyers Bootcamps have been run, training more than 129 individuals in PPA procurement.
- More than 930 listeners attended BRC-A webinars in 2023.
- The BRC-A online Resource Library has been utilised by 8,000 users 6,400 times.
- The Project Marketplace has been viewed by users 2,700 times.

The BRC-A surveyed its members and the broader industry in 2023 to understand their experiences with Corporate PPAs.

BUYERS	DEVELOPERS	SERVICE PROVIDERS
65	28	29

Note: The above represents the total number of partial and full responses to the survey.

BRC-A Members are drawn primarily from New South Wales and Victoria, with a growing base in Queensland.

BRC-A Buyer members are drawn from a diverse range of economic sectors, with strong representation among public sector organisations (local and state governments, higher education) and private enterprises spanning mining, metals and resources, food & beverage manufacturing, consumer goods retailers, transport, property and real estate, financial services and more.

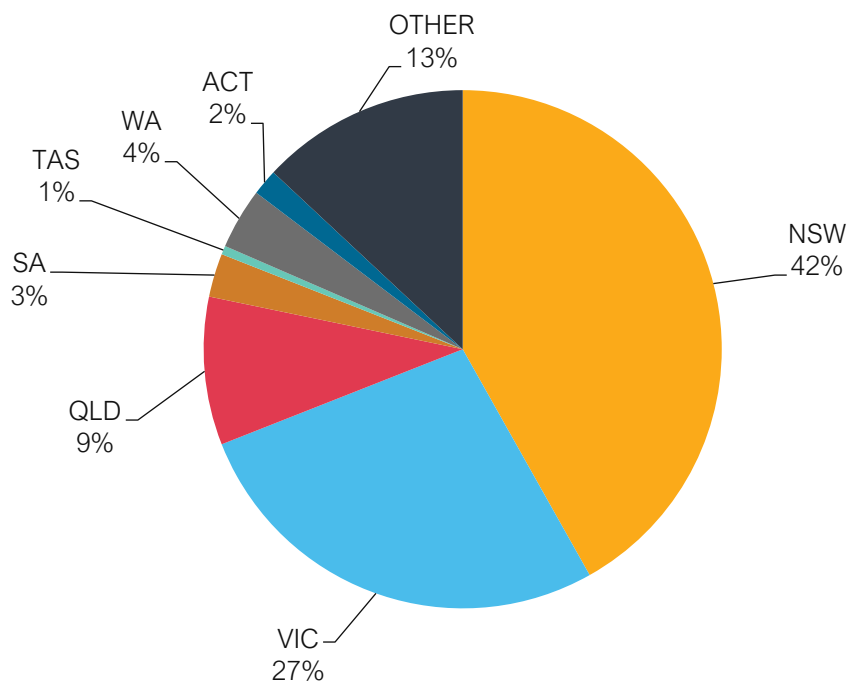


FIGURE 34: BRC-A MEMBERSHIP, BY REGION (%)

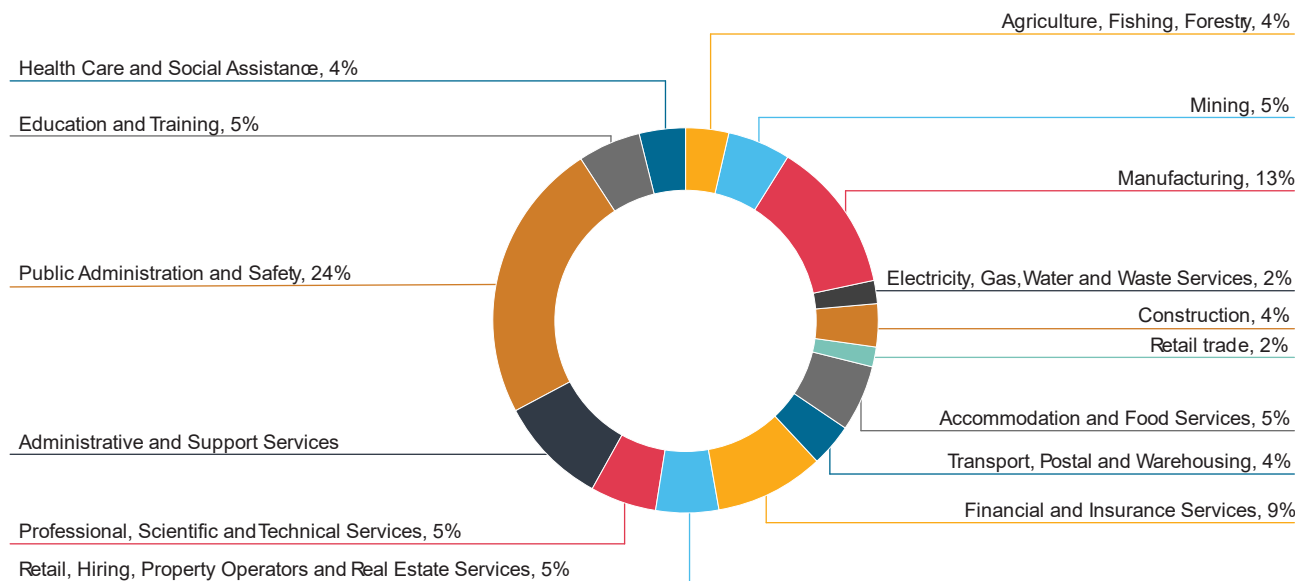


FIGURE 35: ECONOMIC SECTOR DISTRIBUTION OF BUYER MEMBERS



BRC-A Events

The BRC-A hosts and participates in a range of events to build capacity and facilitate knowledge-sharing in the PPA ecosystem.

Buyers' Bootcamps

Buyers' Bootcamps are based on the peer-learning model developed by the US BRC. Staff from approximately 15-20 prospective buyers learn directly from experienced buyers on all aspects of procurement, including selecting an appropriate deal structure, building internal support, how to conduct an RFP and evaluate bids, accounting treatment and the best time to engage the right type of consultants.

Given that BRC-A underwent a major business model change, BRC-A successfully ran 1 sold-out in-person Buyers Bootcamps in mid-October, attended by a wide variety of corporates and councils from all around the country, and through Bootcamps has trained more than 95 organisations in PPA procurement through Bootcamps to date.

Developer Bootcamps

The BRC-A also delivers annual Developer Bootcamps which feature the insights of all types of BRC-A members (Buyers, Developers, Service Providers). This event provides platform for these groups to convey insights to renewable energy Developers operating in Australia in hopes of maximising RFP chances of success, understanding the buyer's journey and instilling tips on how best to differentiate their offering. This year's bootcamp was held at the Clean Energy Council's Australian Clean Energy Summit 2023.

Industry Events

The BRC-A also participates in industry events to build awareness and understanding of Corporate PPAs through presentations on market trends, deal structures, case studies and by participants themselves. Since the launch in November-December 2018, BRC-A has participated regularly in All Energy, the Australian Clean Energy Summit and a range of other industry events (including Energy Users Association and Smart Energy Council events, various industry summits, Renewable Cities etc.).

Webinars

Educational webinars for BRC-A members are hosted as a quick, easily accessible way for members to get information on PPAs. In 2023 the BRC-A continued its annual webinar series, Buying Power, which saw the following topics covered:

- Buying Power 1: 2022 Annual Report and Key Insights for 2023.
- Buying Power 2: 24/7 Renewables and Additionality.
- Buying Power 3: Renewable PPAs & Innovative Alternatives.



BRC-A Marketplace Platform

The BRC-A website hosts an online marketplace platform where developers can list projects seeking an off-taker. Project listings include a range of information on the project status (e.g. seeking planning approval), terms (e.g. minimum term and purchase volume), technology and state. The marketplace is designed to assist buyers understand the market and help connect buyers and sellers.

As at the end of 31st December 2023, the Marketplace Platform contained:

- 35 renewable energy projects
- 5.5 GW of total capacity

BRC-A Resources

The BRC-A is developing and adapting a range of primers, guides, tools and templates from the US for the Australian market. The centrepiece for BRC-A resources is the Buyer's Roadmap, which includes a step-by-step guide to Corporate PPA procurement with supporting resources for each step of the process.

Resource Library

The BRC has a licence from the Rocky Mountain Institute to adapt its primers, guides and tools to the Australian market. The BRC-A has to date adapted the following resources to the Australian market for its members:

- a. Accounting Primer
- b. Chief Financial Officer (CFO) Pitch Deck
- c. Deal Structure Primer
- d. Deal Team Guide
- e. Energy Management Principles Primer
- f. Renewable Retail PPAs Guide
- g. Request for Proposals (RFP) Template
- h. Social Licence Primer
- i. Term Sheet Template
- j. Economic Analysis Primer
- k. Consultants and Renewable Energy PPA Guide
- l. Internal Support Guide
- m. RFP Template for Retail PPAs
- n. Term Sheet for Retail PPAs
- o. Risk Allocation Guide
- p. Best Practice Corporate PPA Guide

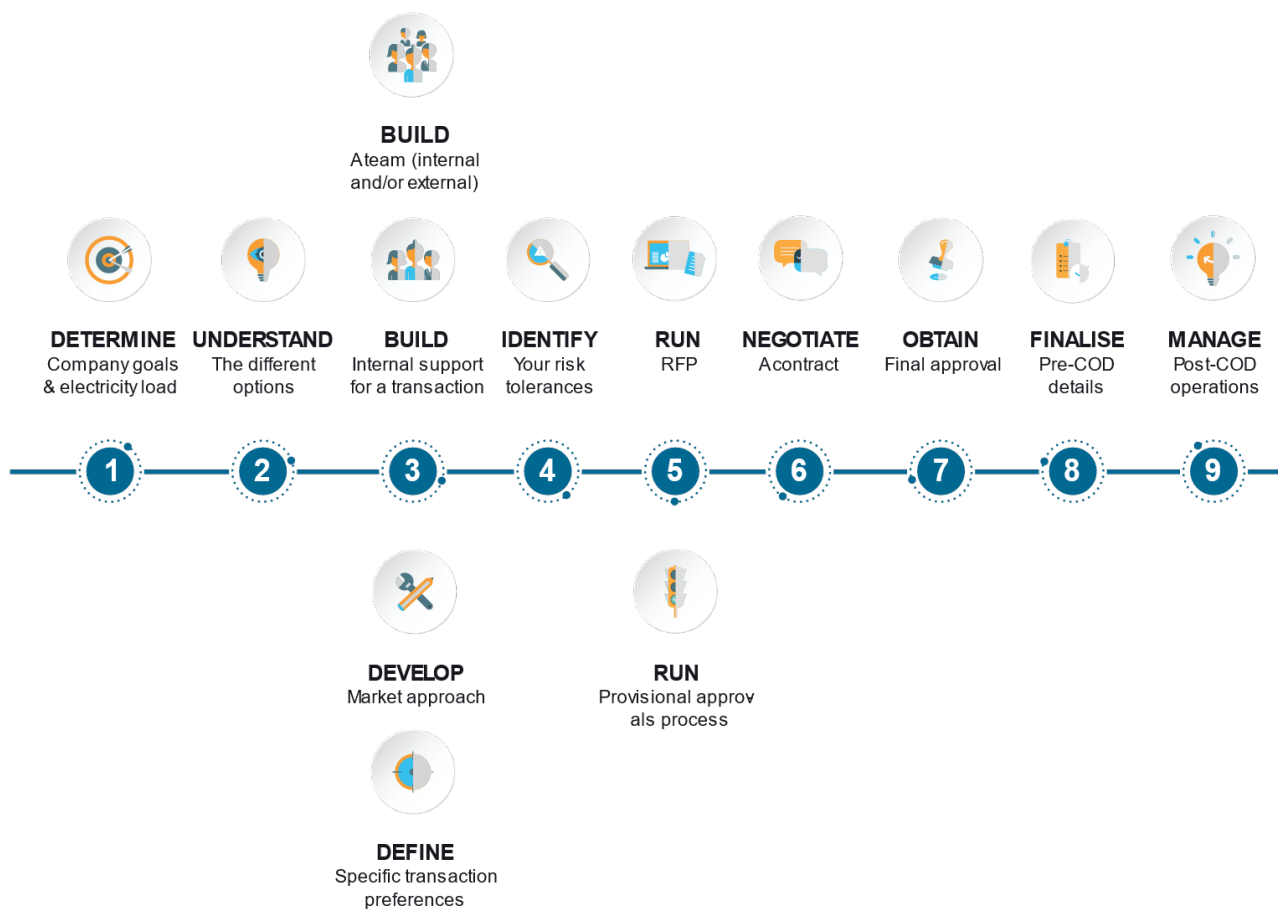


FIGURE 36: BRC-A BUYER'S ROADMAP.

Market Advisory Panel

The BRC-A's Market Advisory Panel (MAP) is a group of professionals from leading industry organisations (including government, finance, consulting, academia) that collaborate with the BRC-A on industry-relevant matters, including but not limited to the development of BRC-A resources. The 2022 membership of the MAP is:

- Abhi Nithyanand, CORE Markets.
- Anita Stadler, Energetics.
- Aylin Cunsolo, Baker McKenzie.
- Ben Waters, Presync.
- Caetano Mantovanni, IAG.
- Daniel Smith, SmartestEnergy.
- Daniel Trujillo, ESCO Pacific.
- David Stavridis, X-ELIO.
- Emily Wood, EUAA.
- Gavin Hughes, Port Macquarie-Hastings Council.
- Jade Fennell, City of Sydney.
- Craig Mickle, Ernst & Young.



- Liam Henderson, City of Melbourne.
- Astarini Suyono, Lightsource bp.
- Liz Fletcher.
- Marilynne Crestias, Renewable Energy Insights Pty Ltd.
- Nicholas Bell, World Kinect Energy Services.
- Tom Shillson, Octopus Investments.
- Ben Spencer, Schneider Electric.
- Pip Harley, NSW Ports.
- Rob Bruce, DELWP.
- Thimo Mueller, AEMO Services.
- Tony Costantini, Sydney Metro.
- Chair Aylin Cunsolo and Deputy Chair Caetano Mantovanni.

The BRC-A would like to express its gratitude for the ongoing contributions made by members of its MAP.



Appendix Two: BRC-A Industry Survey participants profile

The survey captured a range of annual electricity loads, with 44% being large or very large consumers (≥ 50 GWh p.a.), and a growing, now majority, segment of small and mid-sized buyers (<50 GWh p.a.) constituting the remainder. There is significant load among Buyers that are currently pursuing or investigating a PPA, with this survey capturing 8 Buyers using 200 or more GWh of electricity per annum, along with many smaller and mid-sized energy Buyers.

Buyers

The distribution among economic sectors of Buyers that answered the industry survey was largely representative of BRC-A Buyer membership.

Almost three-quarters of Buyer respondents are from businesses employing over 500 people, with small and medium enterprises constituting the remaining third.

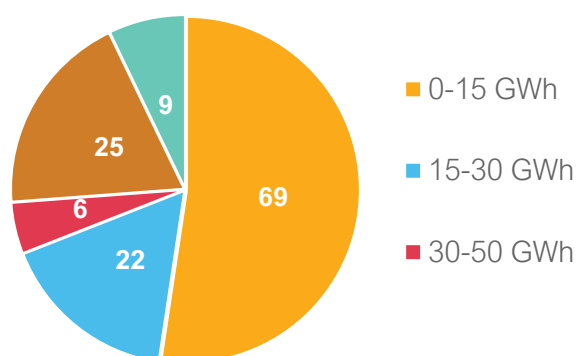


FIGURE 37: BUYER RESPONDENT ANNUAL ELECTRICITY LOADS (%)

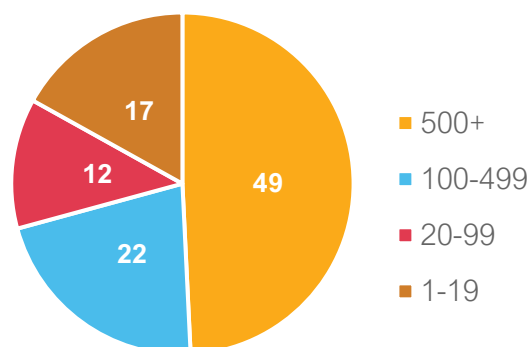


FIGURE 38: BUYER RESPONDENT EMPLOYEE COUNT (%)

Organisations responding to the survey tended to be heavily clustered at the lower end of the spectrum in relation to their current purchase of renewable energy. Over one-quarter of members currently do not purchase renewable energy. Just over three-quarters source less than 40 per cent of their electricity from renewable sources. Just under 15 per cent are entirely powered by renewable energy. Consequently, most are either at an Early stage when it comes to renewable energy or they have negotiated a PPA which covers all of their electricity consumption.

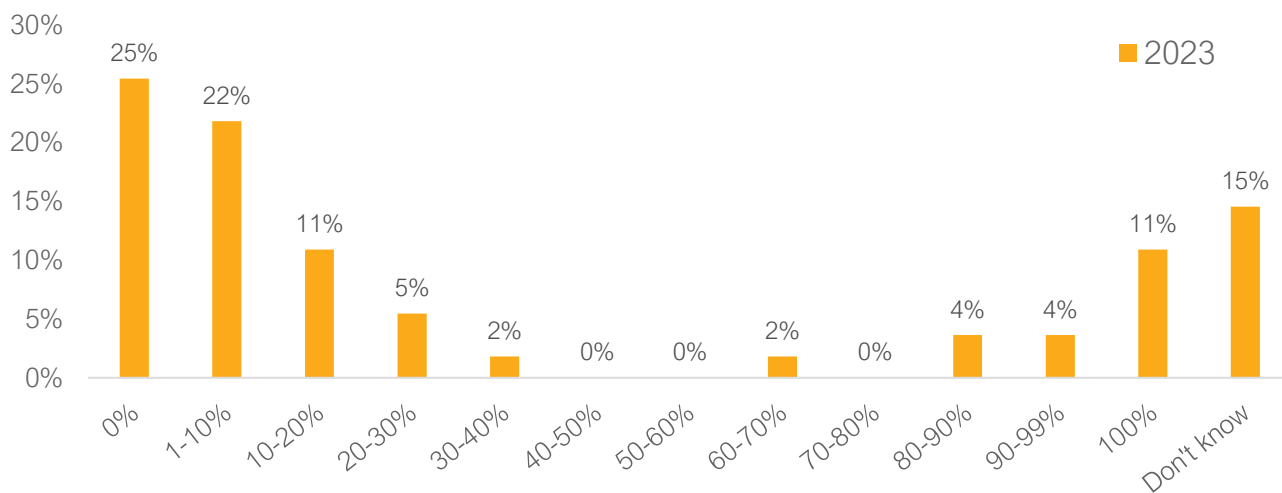


FIGURE 39: BUYER RESPONDENT CURRENT LEVEL OF RENEWABLE ENERGY (#)

Developers

Unfortunately, the sample size for developers was insufficient this year so data is not provided on developer responses.



Appendix Three – Industry survey questions

Energy Buyers

Which of the following sectors best describes the primary activities of your organisation?

- | | |
|--|--|
| <input type="checkbox"/> Education and Training | <input type="checkbox"/> Arts and Recreation Services |
| <input type="checkbox"/> Public Administration and Safety | <input type="checkbox"/> Health Care and Social Assistance |
| <input type="checkbox"/> Construction | <input type="checkbox"/> Professional, Scientific and Technical Services |
| <input type="checkbox"/> Manufacturing | <input type="checkbox"/> Transport, Postal and Warehousing |
| <input type="checkbox"/> Retail, Hiring, Property Operators and Real Estate Services | <input type="checkbox"/> Administrative and Support Services |
| <input type="checkbox"/> Accommodation and Food Services | <input type="checkbox"/> Agriculture, Fishing, Forestry |
| <input type="checkbox"/> Electricity, Gas, Water and Waste Services | <input type="checkbox"/> Information Media and Telecommunications |
| <input type="checkbox"/> Financial and Insurance Services | <input type="checkbox"/> Wholesale Trade |
| <input type="checkbox"/> Retail Trade | <input type="checkbox"/> Other |
| <input type="checkbox"/> Mining | |

How many persons does your organisation employ?

- | | |
|----------------------------------|--------------------------------|
| <input type="checkbox"/> 500+ | <input type="checkbox"/> 1-19 |
| <input type="checkbox"/> 100-499 | <input type="checkbox"/> 20-99 |

What is the size of your annual electricity load?

- | | |
|------------------------------------|-------------------------------------|
| <input type="checkbox"/> 0-15 GWh | <input type="checkbox"/> 50-200 GWh |
| <input type="checkbox"/> 15-30 GWh | <input type="checkbox"/> 200+ GWh |
| <input type="checkbox"/> 30-50 GWh | |

What proportion of your electricity load is currently sourced from renewable energy?

- | | |
|---------------------------------|-------------------------------------|
| <input type="checkbox"/> 0% | <input type="checkbox"/> 60-70% |
| <input type="checkbox"/> 1-10% | <input type="checkbox"/> 70-80% |
| <input type="checkbox"/> 10-20% | <input type="checkbox"/> 80-90% |
| <input type="checkbox"/> 20-30% | <input type="checkbox"/> 90-99% |
| <input type="checkbox"/> 30-40% | <input type="checkbox"/> 100% |
| <input type="checkbox"/> 40-50% | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> 50-60% | |

Experience with Corporate Renewable Power Purchase Agreements (PPA)*

Which of the following best describes the level of experience of your organisation with a renewable energy PPA:

- Our organisation has completed a PPA
- Our organisation is currently pursuing or investigating whether to pursue a PPA
- Our organisation is interested in learning more about PPAs but has not taken any major steps
- We looked at PPAs but have decided they are not a good option for our organisation
- We don't know much about PPAs and are not interested

Why is your organisation disinterested in PPAs?

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> Insufficient cost savings | <input type="checkbox"/> Too complex |
| <input type="checkbox"/> Long terms unsuitable for our organisation | <input type="checkbox"/> Other |
| <input type="checkbox"/> Too risky | |

If your organisation has completed a PPA

How long did the process take from start to finish?

- | | |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> < 6 months | <input type="checkbox"/> 18-24 months |
| <input type="checkbox"/> 6-12 months | <input type="checkbox"/> 2+ years |
| <input type="checkbox"/> 12-18 months | |

On a scale of 1-5, how challenging was it to develop a PPA?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

At what stage of the process would independent assistance have been most helpful?

- | | |
|---|--|
| <input type="checkbox"/> Business case and internal stakeholder support | <input type="checkbox"/> Procurement process |
| <input type="checkbox"/> Investigating/assessing options | <input type="checkbox"/> Negotiation |

What were the 3 major barriers you experienced?

- | | |
|---|---|
| <input type="checkbox"/> The complexity of PPAs and understanding the options | <input type="checkbox"/> Finding the right project or developer |
| <input type="checkbox"/> Market uncertainty | <input type="checkbox"/> Transaction costs |
| <input type="checkbox"/> Securing internal agreement | <input type="checkbox"/> Policy uncertainty |
| <input type="checkbox"/> Negotiating a deal that met the needs of your organisation and the developer | <input type="checkbox"/> COVID-19 impacts |
| <input type="checkbox"/> Finding the right specialists | <input type="checkbox"/> Licensing issues |
| <input type="checkbox"/> Accounting issues | <input type="checkbox"/> No major barrier |
| | <input type="checkbox"/> Other |

On a scale of 1-5, how would you rate the scale of transaction costs of a PPA?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

What type of PPA did you choose?

- Wholesale (direct agreement with RE project separate from retail contract)
- Retail (PPA integrated into retail contract)
- Sleeved (PPA negotiated with project and then integrated into retail contract)
- Other

Why did you choose this type of PPA?

- | | |
|--|---|
| <input type="checkbox"/> Most familiar | <input type="checkbox"/> Transaction costs |
| <input type="checkbox"/> Less complexity | <input type="checkbox"/> Legal or accounting issues |
| <input type="checkbox"/> Risk management | <input type="checkbox"/> Impact/sustainability/PR |
| <input type="checkbox"/> Financial/price | <input type="checkbox"/> Other |

When evaluating Corporate PPAs, how important was *PPA price*? (5 = extremely important, 1 = not important at all)?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |



How important were *community benefits (benefit fund, infrastructure etc.)*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

The *developer's reputation*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local community support (i.e. social licence)?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Financial risks?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Jobs and other benefits for disadvantaged groups*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Impacts on local environment and biodiversity?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local employment and industry?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Were there any other important criteria when evaluating Corporate PPAs? Please list.

In retrospect, what is the one change you would recommend to make it easier to do RE PPAs?

If your organisation is currently pursuing or investigating whether to pursue a PPA

What is the main driver for your organisation?

- | | |
|---|--|
| <input type="checkbox"/> Electricity price certainty | <input type="checkbox"/> Brand leadership |
| <input type="checkbox"/> Lower electricity prices | <input type="checkbox"/> Corporate Social Responsibility goals |
| <input type="checkbox"/> Greenhouse emissions or renewable energy targets | <input type="checkbox"/> Other |





What has been the impact of the electricity market volatility in 2022 level of buyer interest in PPAs?

- No impact – we are still considering or pursuing a renewable PPA
- No impact – we were not considering or pursuing a renewable PPA
- Positive impact – our interest in a renewable PPA has increased
- Negative impact – our interest in a renewable PPA has decreased
- Unsure

Why has your interest in a PPA increased?

- Buyers are seeking greater price certainty
- There are more buyers with climate or renewable energy targets
- There are more buyers with Corporate sustainability goals
- Other

Why has your interest in a PPA decreased?

- Waiting for greater market stability
- Focussing on core business
- Focussing on other energy projects
- Other

How advanced are you in the process of pursuing a PPA?

- We are in negotiations with project developers
- We are currently assessing the business case for an PPA
- We have issued or are about to issue a Request for Proposal
- We are investigating the feasibility of an PPA

What are the primary areas on which you're seeking information and/or support for PPAs?

- Understanding the electricity market
- Options assessment
- Economic or financial aspects
- Legal and/or accounting issues
- Electricity markets pricing
- Strategies for securing internal support
- Template documents (e.g. RFPs, term sheets)
- Strategies for aggregated deals

What are the major barriers you have encountered to date?

- Choosing the right model that meets your organisation's needs
- Finding the right project or developer
- Internal agreement or commitment
- Finding the right specialists to support you
- Understanding of electricity markets and pricing
- Market uncertainty
- Transaction costs
- Policy uncertainty
- Legal or accounting standards
- COVID-19 impacts
- None
- Other

When evaluating Corporate PPAs, how important do you expect *PPA Price* will be? (5 = extremely important, 1 = not important at all)?

- 1
- 2
- 3
- 4
- 5

How important do you expect *community benefits (benefit fund, infrastructure etc.)* will be?

- 1
- 2
- 3
- 4
- 5



The developer's reputation?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local community support (i.e. social licence)?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Financial risks?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Jobs and other benefits for disadvantaged groups?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Impacts on local environment and biodiversity?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local employment and industry?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Are there any other criteria you expect will be important when evaluating Corporate PPAs? Please list.

If your organisation is interested in learning more about an PPA

What is the main driver(s) for your organisation?

- | | |
|---|--|
| <input type="checkbox"/> Electricity price certainty | <input type="checkbox"/> Brand leadership |
| <input type="checkbox"/> Lower electricity prices | <input type="checkbox"/> Corporate Social Responsibility goals |
| <input type="checkbox"/> Greenhouse emissions or renewable energy targets | <input type="checkbox"/> Other |

What are the primary areas on which you seeking information and/or support for PPAs?

- | | |
|---|--|
| <input type="checkbox"/> Costs and benefits of PPAs | <input type="checkbox"/> Strategies for securing internal support |
| <input type="checkbox"/> Options and deal structures | <input type="checkbox"/> Template documents (e.g. RFPs, term sheets) |
| <input type="checkbox"/> Economic or financial aspect | <input type="checkbox"/> Strategies for aggregated deals |
| <input type="checkbox"/> Legal and accounting issues | <input type="checkbox"/> Other |
| <input type="checkbox"/> Electricity markets | |

Is your organisation a BRC-A Member?

- | | |
|------------------------------|---------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> I don't know |
| <input type="checkbox"/> No | |

What was your primary reason for joining?

- | | |
|--|---|
| <input type="checkbox"/> Education and training | <input type="checkbox"/> Making connections with buyers |
| <input type="checkbox"/> Networking and industry connections | <input type="checkbox"/> Making connections with developers |
| <input type="checkbox"/> Access to the marketplace platform | <input type="checkbox"/> Events |

Developers

How many persons does your organisation employ?

- | | |
|--------------------------------|----------------------------------|
| <input type="checkbox"/> 1-19 | <input type="checkbox"/> 100-499 |
| <input type="checkbox"/> 20-99 | <input type="checkbox"/> 500+ |

What is the size of your current (operating) portfolio in Australia?

- | | |
|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> 0-100 MW | <input type="checkbox"/> 1000-2000 MW |
| <input type="checkbox"/> 100-500 MW | <input type="checkbox"/> 2000+ |
| <input type="checkbox"/> 500-1000 MW | |

What is the size of your future project pipeline in Australia?

- | | |
|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> 0-100 MW | <input type="checkbox"/> 500-1000 MW |
| <input type="checkbox"/> 100-500 MW | <input type="checkbox"/> 1000+ MW |

In which states do you have operating projects?

- | | |
|------------------------------|------------------------------|
| <input type="checkbox"/> NSW | <input type="checkbox"/> SA |
| <input type="checkbox"/> VIC | <input type="checkbox"/> TAS |
| <input type="checkbox"/> QLD | |

Experience with corporate RE PPAs

Which of the following best describes the level of experience of your organisation with a corporate renewable energy PPA:

- Our organisation has completed a Corporate Renewable PPA in the past 2 years
- Our organisation is considering or pursuing a Corporate Renewable PPA
- Our organisation is not interested in pursuing a Corporate Renewable PPA

If your organisation has completed a Corporate Renewable PPA

How long did the process take from start to finish?

- | | |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> < 6 months | <input type="checkbox"/> 18-24 months |
| <input type="checkbox"/> 6-12 months | <input type="checkbox"/> 2+ years |
| <input type="checkbox"/> 12-18 months | |

On a scale of 1-5, how challenging was it to develop a PPA?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |





At what stage of the PPA process could independent assistance be most helpful?

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Helping buyers assess options | <input type="checkbox"/> Negotiation |
| <input type="checkbox"/> EOI's | <input type="checkbox"/> Other |
| <input type="checkbox"/> RFPs | |

What were the major barriers you experienced?

- | | |
|---|---|
| <input type="checkbox"/> Transaction costs | <input type="checkbox"/> Negotiating a deal that met the needs of your organisation and the buyer |
| <input type="checkbox"/> The complexity of the process | <input type="checkbox"/> Market or policy uncertainty |
| <input type="checkbox"/> Buyer understanding of PPAs | <input type="checkbox"/> COVID-19 impacts |
| <input type="checkbox"/> Buyer legal or accounting issues | <input type="checkbox"/> No major barrier |
| <input type="checkbox"/> Buyer price expectations | <input type="checkbox"/> Other |
| <input type="checkbox"/> Finding the right buyer | |

On a scale of 1-5, how would you rate the scale of transaction costs of a corporate RE PPA?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

In your experience, when Buyers are evaluating Corporate PPAs, how important is *PPA price*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

In your experience, how important are *community benefits (benefit fund, infrastructure etc.)*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Developer reputation?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local community support (i.e. social licence)?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Financial risks?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Jobs and other benefits for disadvantaged groups?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |



Impacts on local environment and biodiversity?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local employment and industry?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Were there any other important criteria for Buyers when evaluating Corporate PPAs? Please list.

In retrospect, what is the one change you would recommend to make it easier to do RE PPAs?

If your organisation is currently pursuing or investigating whether to pursue a corporate RE PPA

How advanced are you in the process of pursuing a PPA?

- | | |
|--|---|
| <input type="checkbox"/> We are in negotiations with project buyers | <input type="checkbox"/> We are currently searching for RE PPA off-takers |
| <input type="checkbox"/> We have responded or are about to respond to a Request for Proposal | <input type="checkbox"/> We are investigating the feasibility of a RE PPA |

What are the major barriers you have encountered to date?

- | | |
|---|--|
| <input type="checkbox"/> Buyer understanding (e.g. electricity markets and pricing) | <input type="checkbox"/> Market and policy uncertainty |
| <input type="checkbox"/> Finding a buyer | <input type="checkbox"/> Transaction costs |
| <input type="checkbox"/> Buyer price expectations | <input type="checkbox"/> COVID-19 impacts |
| <input type="checkbox"/> Other buyer expectations or requirements (e.g. RFP) | <input type="checkbox"/> None |
| <input type="checkbox"/> Negotiating a deal that meets the needs of your organisation and the buyer | <input type="checkbox"/> Other |

What kind of independent assistance would be most helpful in supporting your PPA processes or the market at large?

- | | |
|--|--|
| <input type="checkbox"/> Educating buyers | <input type="checkbox"/> Strategies for aggregated deals |
| <input type="checkbox"/> Connections with buyers | <input type="checkbox"/> Lower transaction costs |
| <input type="checkbox"/> Template documents (e.g. RFPs, term sheets) | <input type="checkbox"/> Other |

In your experience, when Buyers are evaluating Corporate PPAs, how important is *PPA price*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

In your experience, how important are *community benefits (benefit fund, infrastructure etc.)*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |



Developer reputation?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local community support (i.e. social licence)?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Financial risks?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Jobs and other benefits for disadvantaged groups?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Impacts on local environment and biodiversity?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local employment and industry?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Are there any other important criteria for Buyers when evaluating Corporate PPAs? Please list.

What is the minimum contract *length (years)* you're seeking in a PPA?

What is the minimum *off-take agreement scale (GWh)* you're seeking in a PPA?

Why are you not interested in Corporate Renewable PPAs?

- | | |
|---|--|
| <input type="checkbox"/> The transaction costs are too high | <input type="checkbox"/> There is not interest from buyers at the moment |
| <input type="checkbox"/> There are insufficient buyers at the right scale for our project | <input type="checkbox"/> Other |

What impact will the development of the Renewable Energy Zones have on the volume of Corporate PPAs?

- | | |
|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> Increase | <input type="checkbox"/> No change |
| <input type="checkbox"/> Decrease | <input type="checkbox"/> Don't know |

Why in your assessment has the interest in PPAs amongst buyers increased?

- | | |
|---|--|
| <input type="checkbox"/> Buyers are seeking greater price certainty | <input type="checkbox"/> There are more buyers with Corporate sustainability goals |
| <input type="checkbox"/> There are more buyers with climate or renewable energy targets | <input type="checkbox"/> Other |



Why in your assessment has the interest in PPAs amongst buyers decreased?

- | | |
|--|--------------------------------|
| <input type="checkbox"/> Less scope for cost savings | <input type="checkbox"/> Other |
| <input type="checkbox"/> Focussing on core business | |

Is your organisation a BRC-A Member?

- | | |
|------------------------------|---------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> I don't know |
| <input type="checkbox"/> No | |

What was your primary reason for joining?

- | | |
|--|---|
| <input type="checkbox"/> Education and training | <input type="checkbox"/> Making connections with buyers |
| <input type="checkbox"/> Networking and industry connections | <input type="checkbox"/> Events |
| <input type="checkbox"/> Access to the marketplace platform | |

Service Providers

How many persons does your organisation employ?

- | | |
|--------------------------------|----------------------------------|
| <input type="checkbox"/> 1-19 | <input type="checkbox"/> 100-499 |
| <input type="checkbox"/> 20-99 | <input type="checkbox"/> 500+ |

What type of services do you provide?

- | | |
|---|--|
| <input type="checkbox"/> Accounting | <input type="checkbox"/> Energy advice |
| <input type="checkbox"/> Financial | <input type="checkbox"/> Sustainability advice |
| <input type="checkbox"/> Legal | <input type="checkbox"/> Other |
| <input type="checkbox"/> Corporate Strategy/marketing | |

Which of the following best describes the level of experience of your organisation with a corporate renewable energy PPA:

- | |
|---|
| <input type="checkbox"/> Our organisation has provided services for a PPA |
| <input type="checkbox"/> Our organisation has not yet provided services for a PPA |

If your organisation has been involved in a PPA

How long did the process take from start to finish?

- | | |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> < 6 months | <input type="checkbox"/> 18-24 months |
| <input type="checkbox"/> 6-12 months | <input type="checkbox"/> 2+ years |
| <input type="checkbox"/> 12-18 months | |

On a scale of 1-5, how challenging was it to develop a PPA?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

What are the major barriers experienced in PPA transactions?

- | | |
|--|---|
| <input type="checkbox"/> Transaction costs | <input type="checkbox"/> Negotiating a deal that met the needs of both organisation |
| <input type="checkbox"/> The complexity of the process | <input type="checkbox"/> Market uncertainty |
| <input type="checkbox"/> Buyer understanding of PPAs | <input type="checkbox"/> Policy uncertainty |
| <input type="checkbox"/> Buyer legal or accounting issues | <input type="checkbox"/> COVID-19 impacts |
| <input type="checkbox"/> Buyers securing internal agreement | <input type="checkbox"/> No major barrier |
| <input type="checkbox"/> Developer understanding of buyer needs or processes | <input type="checkbox"/> Other |

On a scale of 1-5, how would you rate the scale of transaction costs of an RE PPA?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

In your experience, when Buyers are evaluating Corporate PPAs, how important is *PPA price*? (5 = extremely important, 1 = not important at all)

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

When Buyers are evaluating Corporate PPAs, how important are *community benefits (benefit fund, infrastructure etc.)*?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

The developer's reputation?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local community support (i.e. social licence)?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Financial risks?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Jobs and other benefits for disadvantaged groups?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Impacts on local environment and biodiversity?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

Local employment and industry?

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |





Were there any other important criteria when evaluating Corporate PPAs? Please list.

In retrospect, what is the one change you would recommend to make it easier to do PPAs?

In your view, what impact will the development of the Renewable Energy Zones have on the volume of Corporate PPAs?

- | | |
|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> Increase | <input type="checkbox"/> No change |
| <input type="checkbox"/> Decrease | <input type="checkbox"/> Don't know |

Do you have any other comments on the role of Corporate PPAs in the REZs?

Why in your assessment has the interest in PPAs amongst buyers increased?

- Buyers are seeking greater price certainty
- There are more buyers with climate or renewable energy targets
- There are more buyers with Corporate sustainability goals

Why in your assessment has the interest in PPAs amongst buyers decreased?

- | | |
|---|---|
| <input type="checkbox"/> Waiting for greater market stability | <input type="checkbox"/> Focussing on other energy projects |
| <input type="checkbox"/> Focussing on core business | <input type="checkbox"/> Other |

What are the primary areas on which BRC-A should provide information?

- | | |
|--|--|
| <input type="checkbox"/> Options assessment | <input type="checkbox"/> Template documents (e.g. RFPs, term sheets) |
| <input type="checkbox"/> Economic or financial aspects | <input type="checkbox"/> Strategies for aggregated deals |
| <input type="checkbox"/> Legal and/or accounting issues | <input type="checkbox"/> Other |
| <input type="checkbox"/> Deal structuring | |
| <input type="checkbox"/> Electricity markets and pricing | |

Is your organisation a BRC-A Member?

- | | |
|------------------------------|---------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> I don't know |
| <input type="checkbox"/> No | |

What was your primary reason for joining?

- | | |
|--|---|
| <input type="checkbox"/> Education and training | <input type="checkbox"/> Making connections with developers |
| <input type="checkbox"/> Networking and industry connections | <input type="checkbox"/> Events |
| <input type="checkbox"/> Access to the marketplace platform | <input type="checkbox"/> Other |
| <input type="checkbox"/> Making connections with buyers | |

At what stage of the PPA process could independent assistance be most helpful?

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> When buyers are seeking to understand the electricity market and how PPAs work | <input type="checkbox"/> EOIs |
| <input type="checkbox"/> When buyers are assessing options | <input type="checkbox"/> RFPs |
| <input type="checkbox"/> When developers are seeking connections/advice | <input type="checkbox"/> Negotiation |
| | <input type="checkbox"/> Other |

In your experience, when Buyers are evaluating Corporate PPAs, how important are impacts/benefits on local environment and biodiversity? (5 = extremely important, 1 = not important at all)

- | | |
|----------------------------|----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | |

In your experience, when Buyers are evaluating Corporate PPAs, how important are local jobs? (5 = extremely important, 1 = not important at all)

- 1
- 2
- 3

- 4
- 5

What is the minimum contract length (years) you're seeking in a PPA?

What is the minimum off-take agreement scale (GWh) you're seeking in a PPA?

