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Corporate Renewable Power Purchase Agreements in Australia: State of the Market 2022

About the Business Renewables Centre - Australia

The Business Renewables Centre Australia (BRC-A) is a not-for-profit initiative that seeks to help accelerate the uptake of Renewable Energy Corporate Power Purchase Agreements (PPA) in Australia through addressing critical knowledge gaps and facilitating industry networking. The BRC-A is a joint collaboration between WWF-Australia, Climate-KIC Australia and the Institute for Sustainable Futures, University of Technology.

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- the Australian Renewable Energy Agency (ARENA);
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The BRC-A would like to extend gratitude to its Technical Advisory Panel (TAP), a group of industry experts and experienced corporate buyers of offsite renewable energy, for their continuing input into the development of the BRC-A Resource Library.

Disclaimer

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Executive Summary

The emergence and growth of Corporate Renewable Power Purchase Agreements (Corporate PPAs) has been one of the major changes to the market for large-scale renewable energy. Since 2017, based on public information we estimate there have been 137 Corporate PPAs negotiated, contracting over 5.6 GW of renewable energy generation.¹

The growth in Corporate PPAs has diversified the market for large-scale renewable energy and they are now playing an important role in energy transition. As retailer PPAs slowed once their legislated purchase obligations under the Renewable Energy Target, Corporate PPAs and public sector retailers have been the source of on-going investment in large-scale.

Amidst the extraordinary market volatility and record wholesale electricity prices, the State of the Market report highlights both change and continuity in the Corporate PPA sector:

- **Corporate PPA deal volumes in 2022 were the highest recorded:** In 2022, around 1.6 GW of capacity were signed through Corporate PPAs. For three-years running, Corporate PPAs have been over or just under 1 GW and the major market segment ahead of public sector retailers, utility PPAs or merchant projects.
- **Market volatility had mixed impacts on demand for Corporate PPAs:** The National Electricity Market experienced unprecedented wholesale electricity price increases and volatility during 2022. BRC-A's industry survey found divergent views on whether the price volatility had a positive or negative impact on demand for Corporate PPAs, which matches anecdotal feedback. For some organisations, crisis management and uncertainty stalled plans for a PPA. Amongst other organisations, the market volatility stimulated a rush to sign a PPA. In the medium-term, memories of the price spike are likely to support growth in Corporate PPAs to reduce exposure to electricity price movements.

- **The PPA market continues to be driven by buyers with sustainability targets:** Notwithstanding the market volatility, for the third year running the major driver for PPA buyers were renewable energy or emissions targets, corporate social responsibility policies or reputation. The growth in organisations with net zero targets by 2025 or 2030 is likely to solidify this trend. In the midst of market volatility, there is an alignment of financial and sustainability drivers that is likely to underpin on-going strength in the Corporate PPA market.
- **Corporate PPAs with new projects collapsed in 2022 reflecting wider industry trends – but the PPA market appears to be broadly in good health:** Until the last quarter of 2022, there were virtually no Corporate PPAs with new projects this year. The growth of PPAs with operating projects has been occurring for several years as retailers supply demand from smaller buyers. However, the decline in PPAs with new projects in 2022 appears to primarily reflect wider constraints that have impacted on project supply, such as grid connections. PPA prices increased this year – albeit not as much as electricity prices - reflecting a combination of supply-side factors (such as supply-chain inflation and rising interest rates) and demand outstripping supply. The Corporate PPA market became a 'sellers market' as buyers chased a diminishing pool of projects.

The decline of PPAs with new projects naturally sparks debate about the additionality and impact of Corporate PPAs. 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. Notwithstanding the decline in Corporate PPAs with new projects, there remains a healthy diversity across buyer sizes and sectors within the Corporate PPA sector. If the wave of major government policy and program initiatives works to stimulate project supply the volume of Corporate PPAs with new projects is also likely to pick-up.

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.

- **The return of wholesale 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 staged a return this year. Notably, the increase in future electricity prices has increased the cost of firming, and therefore improved the relative value of Wholesale PPAs.

Our annual survey collects information on the key barriers to Corporate PPAs and processes. Here, there was strong continuity with surveys from the past three years. The major findings were:

- **PPAs remain a challenging undertaking** with most buyers rating the difficulty high or very high - though transaction costs are generally rated lower.
- **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.

Whilst 2022 was an incredibly challenging year in the National Electricity Market, Corporate PPAs have continued to be an effective vehicle for renewable energy procurement – and are likely to continue to play a significant role in Australia's energy transition.

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 over medium and long terms.

The key drivers for Corporate PPA buyers are:

- **Sustainability targets** – off-site renewable PPAs are the quickest and often the only way to achieve ambitious targets.
- **Improving budget certainty** in volatile markets.
- The potential for **cost savings**.
- Improving their **brand or social licence** by supporting new renewable energy.

The market for Corporate Renewable PPAs has continued including a wider range of organisations, sizes and sectors. In 2022, PPAs were signed by large resource companies, supermarket chains, regional councils, telecommunications providers, universities and property companies.

ABOUT THE REPORT

The State of the Market 2022 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.

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 WWF-Australia (building on the Renewable Energy Buyers Forum), Climate-KIC Australia and the Institute for Sustainable Futures, University of Technology Sydney. For more information go to businessrenewables.org.au.

As of the end of 2022, BRC-A had 254 members:

Table 1: BRC-A Membership

Membership Group	Quantity
Buyers	147
Developers	54
Service providers	28
Partners/Supporters	25
Total	254

For further information see 'BRC-A Activities in 2022'.

Large-Scale Renewable Energy in Australia

Australia is in the midst of an accelerating transition from a coal-dominated electricity system to renewable energy. In the 2020 Integrated System Plan (ISP), the Australian Energy Market Operator (AEMO) outlines a series of scenarios for energy transition which all end in an electricity system dominated by renewable energy in the mid-2030s.

The share of renewable energy in the National Electricity Market was around 35 per cent for 2022. Under the Renewable Energy Target, retailers are required to purchase renewable electricity but the target has not increased since 2020. Whilst there is a very large pipeline of renewable energy development, in recent years there has been a slowdown in new renewable energy investment by electricity retailers. 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

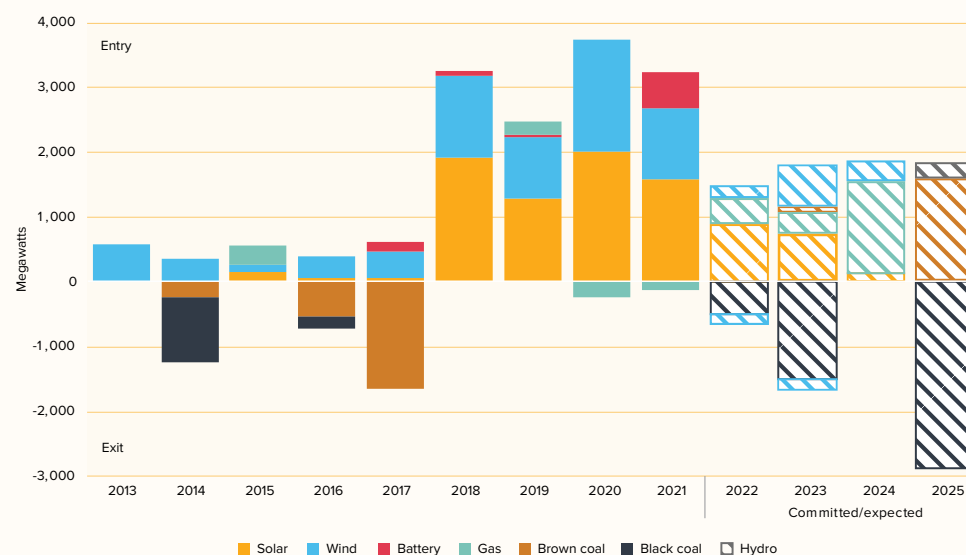
The installation of large-scale renewable energy has slowed significantly after the rapid growth to achieve the Renewable Energy Target. Strong growth in new solar and wind farms occurred from 2017 – 2021, reflecting PPAs signed by retailers to meet commitments under the RET and the growing Corporate 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;²
- Increased financing costs due to rising interest rates and risk premiums.

The slowdown in supply of new renewable energy projects has had an impact on the Corporate PPA market which became a ‘sellers market’. Advisers and buyers reported a scarcity in supply (especially in wind farms) and higher prices.

Figure 1: New and Existing Generation Capacity, the National Electricity Market (MW)



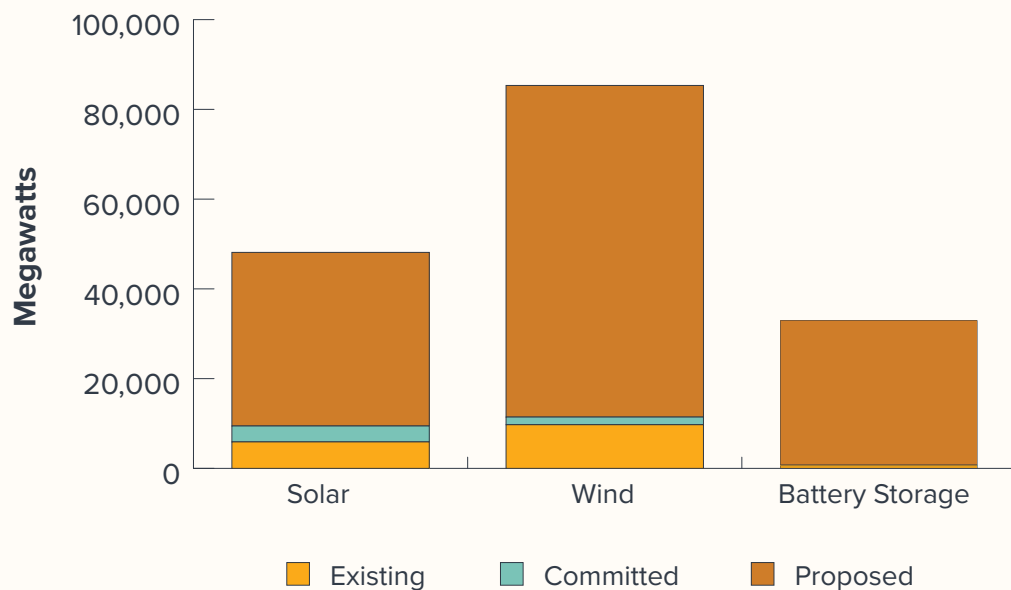
Source: Source: Australian Energy Regulator, 2022

² 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/>.

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.

Figure 2: Large-Scale Renewable Energy Project Pipeline (MW)



Source: Australian Energy Market Operator, *Generation Information*, September 2022.

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.

NEW POLICY AND PROGRAMS ARE LIKELY TO UNLOCK A WAVE OF INVESTMENT IN RENEWABLE ENERGY

During 2022, there was a series of major policy and program developments at Federal and State level that are likely to unlock investment in large-scale renewable energy and storage including (but not limited to):

- Rewiring the Nation: a \$20 billion fund to provide concessional finance for major transmission projects;
- Capacity Investment Scheme: auctions 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;
- Renewable energy generation, transmission and storage targets and programs across New South Wales (Electricity Infrastructure Investment Roadmap), Victoria (Victorian Renewable Energy Target) and Queensland (Energy and Jobs Plan).

The implementation of these policies would broadly align Australia with the ‘Step Change’ scenario in the 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-2030s.

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, over the past 18 months, there has been substantial growth in **Retail PPAs** and models for buying renewable energy.

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 2022, there have been 142 publicly confirmed corporate renewable PPAs in Australia which have contracted more than 5.8 GW of renewable electricity and enabled or supported roughly 14 GW of project capacity.



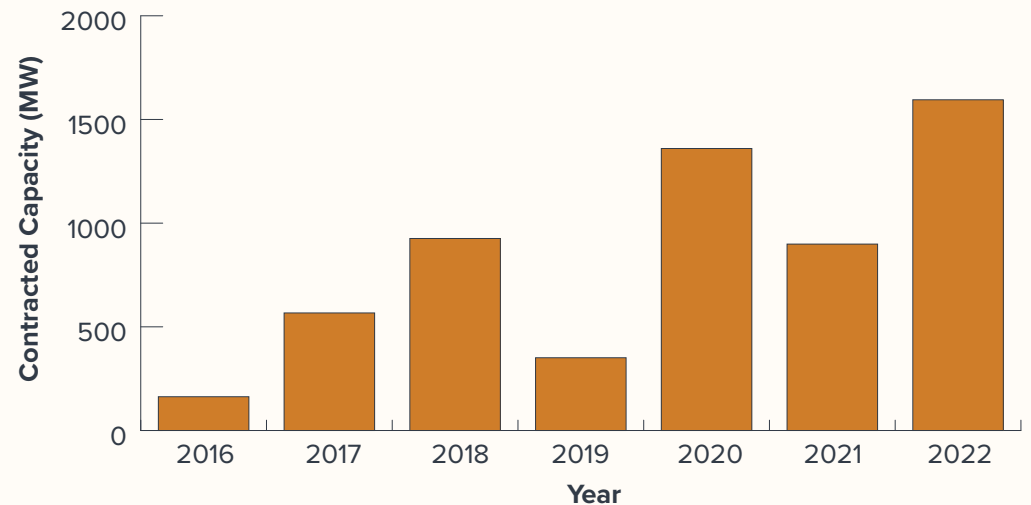
Source: BRC-A PPA Database 2022.

The total value of large-scale renewable capacity bought through PPAs to date is approximately \$3.2 billion and the supported capacity is valued at approximately \$6.9 billion.³

A RECORD YEAR FOR CORPORATE RENEWABLE PPAS

A new record for the volume of Corporate Renewable PPA deals was set in 2022 (just under 1600 MW), eclipsing the previous high of 2021 (1360 MW). This represents the third year in a row where deal volumes have been over or just under 1 GW.

Figure 3: Corporate PPAs, Volume of Contracts (MW), Annual

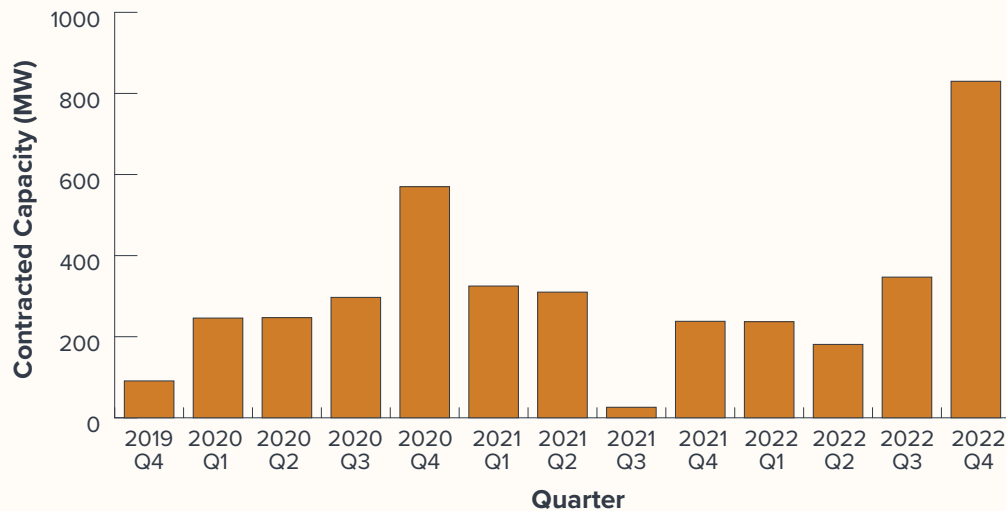


Source: BRC-A PPA Database 2022

³ PPA data drawn from BRC-A PPA database; capacity costs from Graham, P., Hayward, J., Foster, J. and Havas, L. 2022, GenCost 2021-22: final report, CSIRO.

After a slowdown in deal volumes in the middle of the year, there was a strong finish with 800MW of announced deals in the final quarter of 2022.

Figure 4: Corporate PPAs, Volume of Contracts (MW), Quarterly



Source: BRC-A PPA Database 2022

The health of the Corporate PPA market was underlined by the diversity of buyer types and sizes during 2022. There were a series of PPAs signed with high-profile corporates including:

- Microsoft: 315 MW with Walla Walla Solar Farm (South Australia)
- Anglo-American: 234 MW with Clarke Creek wind farm and Blue Grass Solar Farm (Queensland)
- BHP: 203 MW with Goyder South wind farm (SA)
- Apple: 164 MW with Upper Burdekin wind farm (Queensland)

- Telstra: 111 MW with Macintyre Wind Farm (Queensland)
- Woolworths: 38 MW with Port August Renewable Energy Park (South Australia)

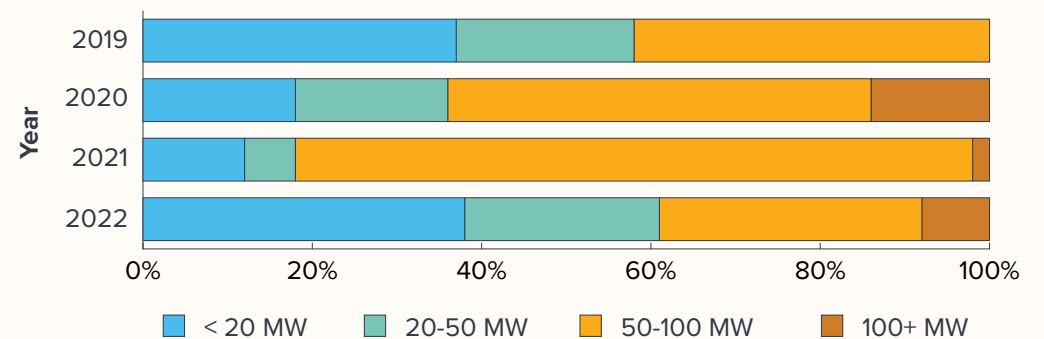
Notably, there were multiple PPAs signed by buyer groups:

- Southern Sydney Regional Organisation of Councils: 95.9 MW with Moree, Nevertire and Hillston solar farms.
- Central West NSW Joint Organisation of Councils: 11.4 MW with Bodangora Wind Farm (NSW)
- IFM Investors: a buyers group comprising transport and health infrastructure buyers, 41MW with Stockyard wind farm (Victoria).

There were also PPAs signed with smaller service sector buyers such as BUPA and HSF lawyers.

The diversity of buyers was reflected in the growth in the volume of corporate PPAs at both ends of the market – amongst smaller and larger buyers.

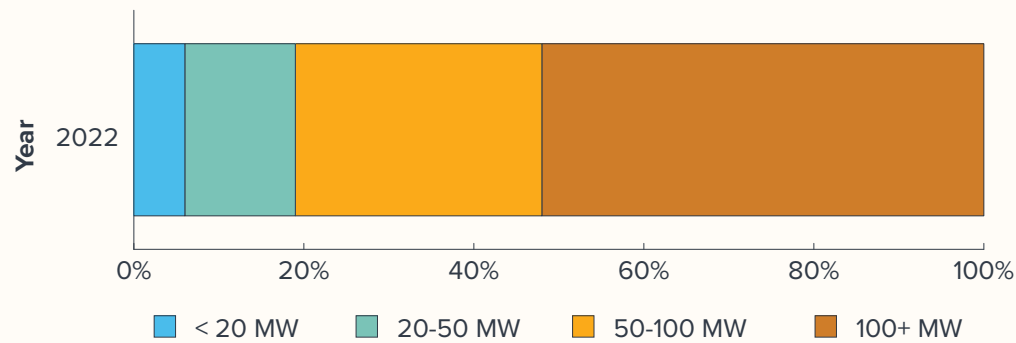
Figure 5: Corporate PPAs, Segments by size (% of deals)



Source: BRC-A PPA Database 2022

When looking at the market share by buyer size in terms of capacity contracted, the deals over 100MW still accounted for over half the market in 2022. Nonetheless, the data shows the Corporate PPA market is catering for a range of buyer sizes. Whilst the smallest market segment (<20 MW) only comprises 6 per cent of the market that still added up to almost 100 MW of capacity.

Figure 6: Corporate PPAs, Segments by size, 2022 (% of capacity)



Source: BRC-A PPA Database 2022

MARKET SEGMENTS: CORPORATE PPAS AND STATE-OWNED RETAILERS CONTINUE TO DOMINATE

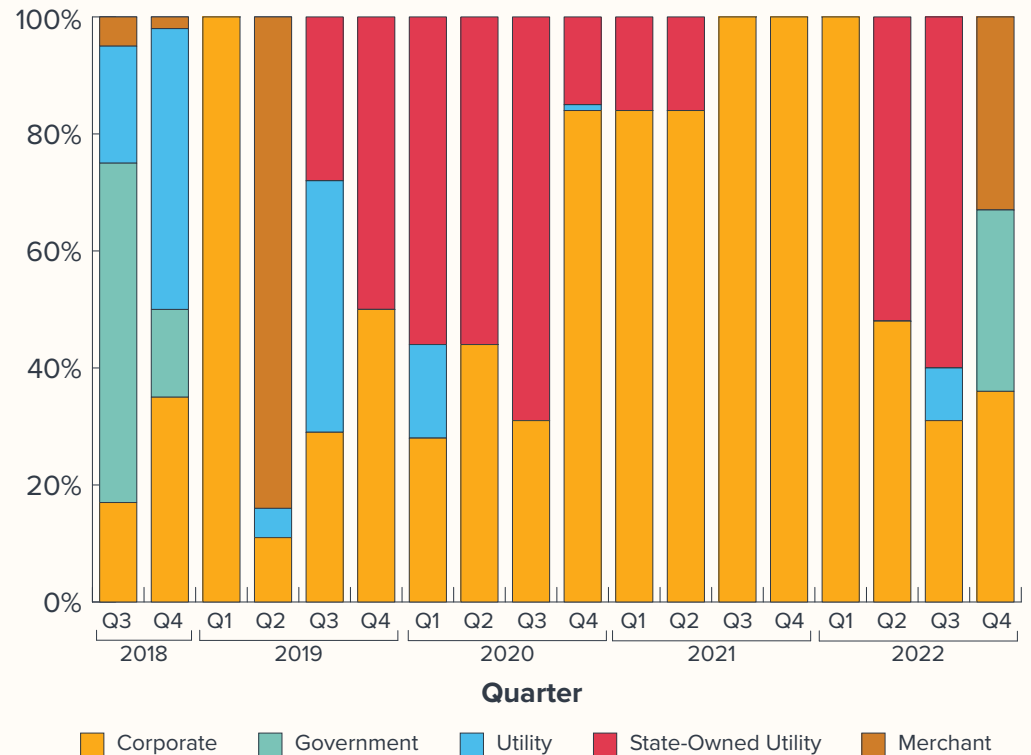
There are four market segments in Australia’s large-scale renewable energy market:

1. **Utility PPAs:** deals between electricity retailers and renewable energy projects
2. **Merchant projects:** solar and wind farms that sell into the wholesale market without a PPA
3. **Government PPAs:** auctions by government for renewable energy using general revenue (i.e. not for their own operations)

4. **Corporate PPAs:** deals with renewable energy projects by public and private sector buyers for their own operations.

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.

Figure 7: PPA Market Segments, 2018-22



Source: BRC-A PPA Database 2022

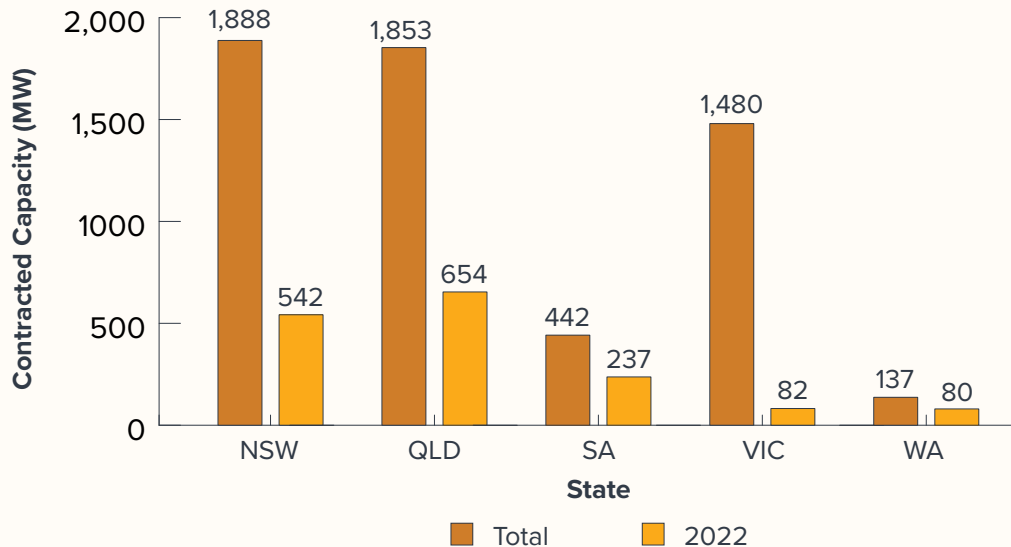
In the early years, Corporate PPAs generally accounted for 30 - 50 per cent of the market - but for the past two years, public retailers and corporate buyers have constituted almost the entirety of procurement for large-scale renewable energy.

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 led the pack in 2022 (around 650 MW), followed by NSW (540 MW) and South Australia (235 MW). Victorian deal volumes were down on past years (80 MW). Activity remains low in Western Australia (80 MW).

Figure 8: Corporate PPAs by state (MW)



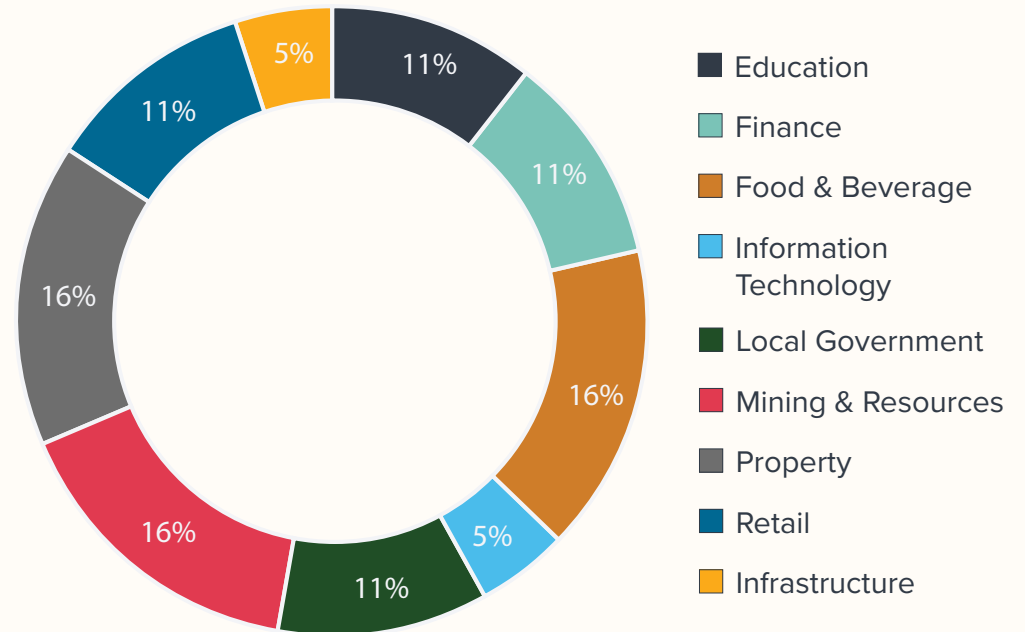
Source: BRC-A PPA Database 2022.

Note: Total = 2016 - 2022.

BUYER SECTORAL COMPOSITION REMAINED 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 9: Number of Corporate PPAs by Sector, 2022 (%)



Source: BRC-A PPA Database 2022

KEY CORPORATE PPA TRENDS

The State of the Market report highlights both change and continuity in the Corporate PPA sector during 2022:

- **Market volatility had mixed impacts on demand for Corporate PPAs:** For some organisations, crisis management and uncertainty stalled plans for a PPA. Amongst other organisations, the crisis stimulated a rush to sign a PPA.
- **The PPA market continues to be driven by buyers with sustainability drivers:** Notwithstanding the market volatility, for the third year running the major driver for PPA buyers were sustainability targets, corporate social responsibility policies or reputation. There is an alignment of financial and sustainability drivers that is likely to underpin on-going strength in the Corporate PPA market.
- **Corporate PPAs with new projects collapsed in 2022 reflecting wider industry trends – but the PPA market appears to be broadly in good health.**

Until the last quarter of 2022, there were virtually no Corporate PPAs with new projects this year. The growth of PPAs with operating projects has been occurring for several years as retailers supply demand from smaller buyers. However, this appears to primarily reflect wider constraints that have impacted on supply, such as grid connections. A wave of major government policy and program initiatives is likely to stimulate supply of new projects.

A healthy Corporate PPA market should exhibit a mix of buyer sizes across sectors and PPA models, including PPAs with larger buyers underwriting new projects and retailers on-selling PPAs from operating projects to medium-sized buyers.

Whilst that combination of new and operating PPAs was not there in 2022, there remains a healthy diversity across buyer sizes and sectors within the Corporate PPA sector.

- **The return of wholesale PPAs:** where there had been a marked shift from Wholesale PPAs to Retail PPAs in the last couple of years, Wholesale PPAs staged a return this year. Notably, the increase in electricity future prices has

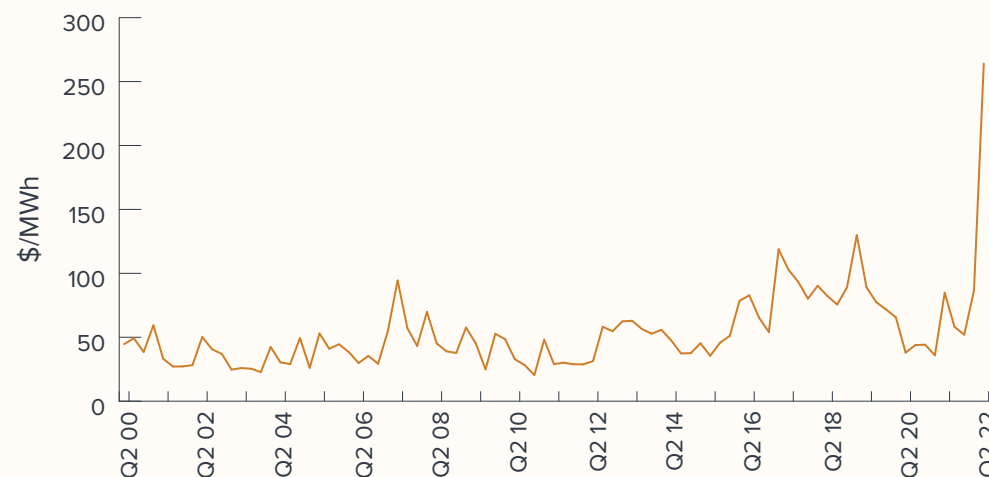
increased the cost of firming, and therefore improved the value of Wholesale PPAs relative to Retail PPAs.

Whilst 2022 was an incredibly challenging year in the National Electricity Market, Corporate PPAs have continued to be an effective vehicle for renewable energy procurement – and are likely to continue to play a significant role in Australia's energy transition.

THE IMPACTS OF THE WHOLESALE ELECTRICITY MARKET VOLATILITY ON CORPORATE PPAS WERE VARIABLE

Whilst there have been several price spikes in the wholesale electricity market in recent years, there was an unprecedented price spike in 2022. The average price in Q2, 2022 was \$264/MWh and remained high at \$212/MWh in Q3, 2022. This primarily reflected the impact of international events on coal and gas prices, amplified by local factors such as reduced coal plant availability.

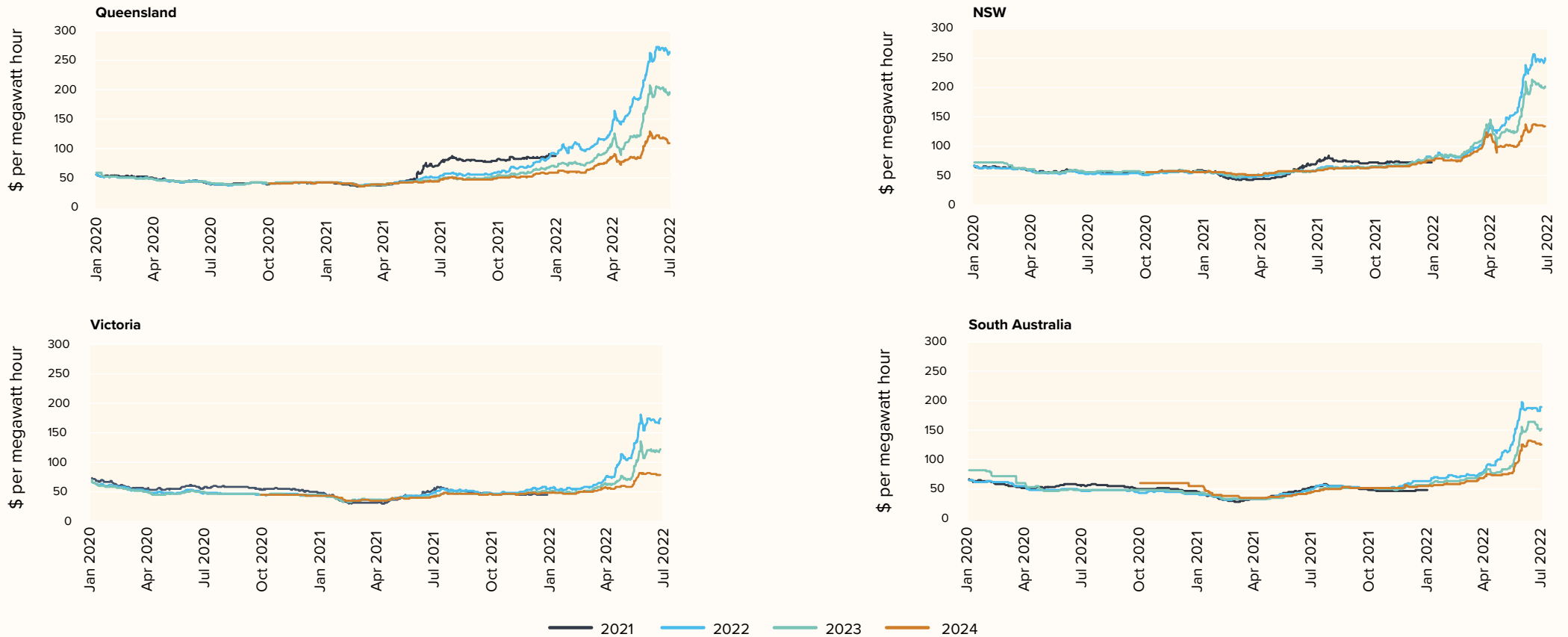
Figure 10: Average Wholesale Electricity Prices, National Electricity Market



Note: for more information, see AEMO's [Quarterly Energy Dynamics report](#).

The price of electricity base futures – where retailers make significant purchases to cover forward requirements for their customers – also hit record highs.

Figure 11: Average Wholesale Electricity Prices, National Electricity Market

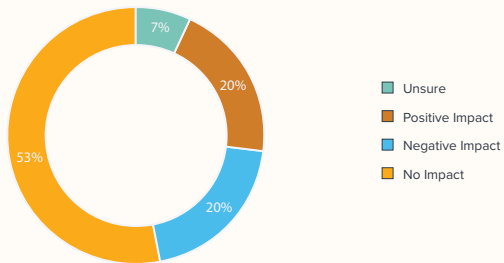


Source: Australian Energy Regulator (2022), *State of the Energy Market*, p.29.

BRC-A conducts an annual survey of PPA buyers, developers and service providers. In this year’s survey, we asked about the impact of the market volatility on demand for Corporate PPAs. Most buyers interviewed considered there was ‘no impact’, whilst the remainder were evenly split as to whether the impact had been positive or negative.

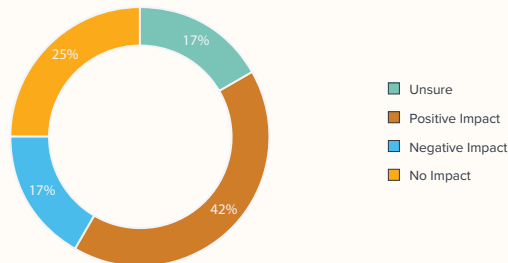
However, only around one-quarter of service providers considered there had been no impact. The most common response was that the volatility had a positive impact (40%) and a smaller group (under 20%) considered there had been a negative impact on demand.

Figure 12: Impact of Market Volatility on Corporate PPA buyer demand - Buyers



Source: BRC-A Industry Survey 2022

Figure 13: Impact of Market Volatility on Corporate PPA buyer demand – Service Providers



Source: BRC-A Industry Survey 2022

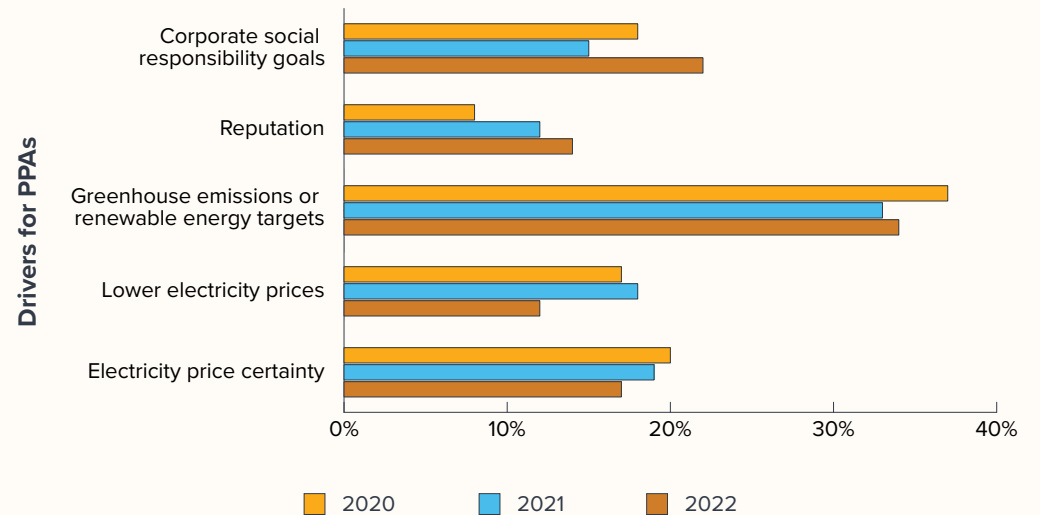
The diversity in responses broadly reflects anecdotal feedback from buyers and advisers. Some advisers reported a rush by buyers to sign PPAs with operating projects to reduce exposure to the soaring electricity prices – and in the context of inadequate supply there was a bidding up of prices for PPAs with operating projects. Other advisers and buyers noted that crisis management overwhelmed longer-term strategies (including negotiating a PPA). Some buyers questioned whether it was a good time to negotiate a PPA for a variety of reasons (e.g. ‘are we buying at the peak?’).

ALIGNMENT BETWEEN PRICE AND SUSTAINABILITY DRIVERS ARE LIKELY TO UNDERPIN GROWTH IN THE CORPORATE PPA MARKET

The impact of the great electricity price spike of 2022 in the medium-term is likely to support the growth of Corporate PPAs. The growth of renewable energy had led some observers to consider we might be entering a new era of low prices. The events of 2022 have underlined that volatility with high and low-price phases are likely as the energy transition proceeds – underlining the value of a PPA.

One of the key factors underpinning the resilience of the Corporate PPA market is the emergence of sustainability buyers as the key market cohort. For three years running, almost two-thirds of buyers in the BRC-A survey nominated non-price drivers for their interest in PPAs. The growth in organisations signing net zero targets and other sustainability commitments are the primary driver for interest in Corporate PPAs. Lower electricity prices and price certainty were nominated by just under 20 per cent of buyers.

Figure 14: What is the primary driver for your interest in Corporate Renewable PPAs?

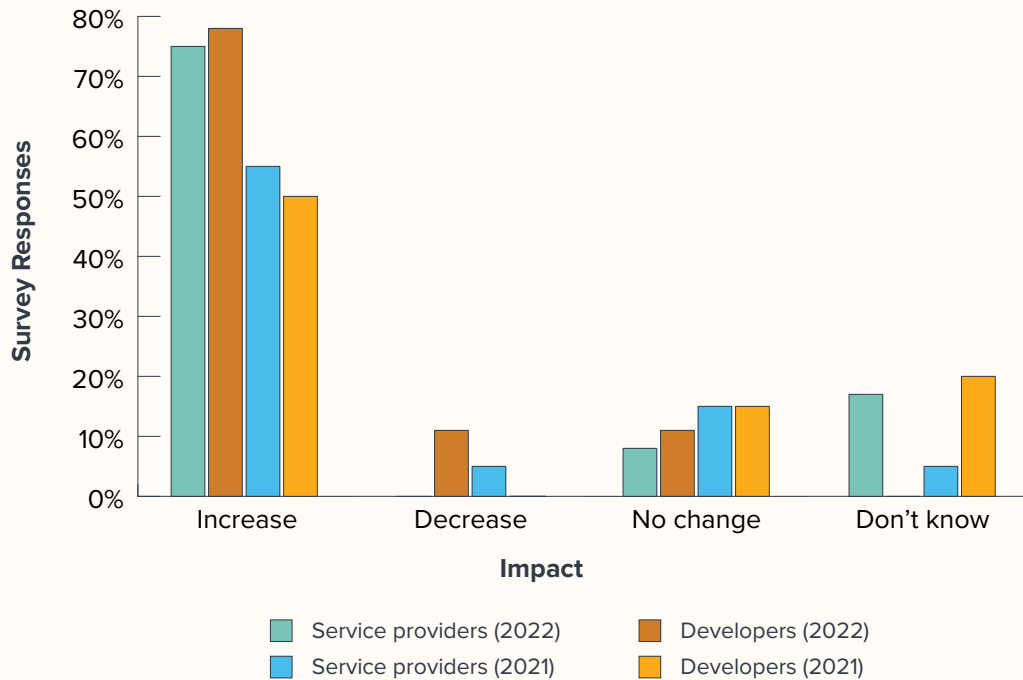


Market participants are also positive about the impact of renewable energy zones on Corporate PPAs.

There have been questions as to whether the REZs might ‘crowd out’ corporate PPAs (as projects sign up for a strike price with government and/or PPAs with retailers returning to the market). However, over 70 per cent of developers and service providers expect the REZs to increase corporate PPAs. The design of the NSW Long-Term Electricity Supply Agreement (LTESA) tender criteria in particular will create incentives by favouring bidders with an existing offtake in the bidding process. The most likely outcome appears to be a mixed market in which retailers buy for their own portfolios, broker deals between projects and larger buyers and on-sell to mid-sized buyers.

The demand for Corporate PPAs outstripped supply in 2022 for both new and operating projects. It is important that the REZs bring on new supply – as the supply constraint changed the balance in the PPA market between new and operating projects in 2022.

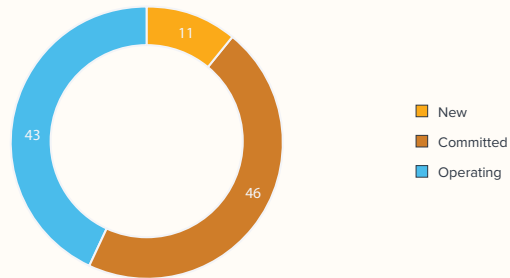
Figure 15: What Impact will the Renewable Energy Zones have on Corporate Renewable PPAs?



CORPORATE PPAS WITH NEW PROJECTS CONTINUED TO DECLINE IN 2022

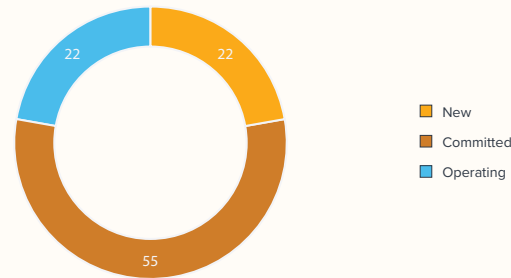
The decline in PPAs with new projects accelerated in 2022. Only around ten per cent of the deals were with new projects accounting for just over 20 per cent of the contracted volume (down from around 30 per cent in 2021) – the lowest figure recorded by the BRC-A (see Figures 16 & 17). One very large PPA in December 2022 by Microsoft lifted the market share of new projects – earlier in the year there had been only two moderately-sized PPAs with new projects (Figure 18).

Figure 16: Corporate PPAs, Project Stage, 2022 (%)



Source: BRC-A PPA Database 2022

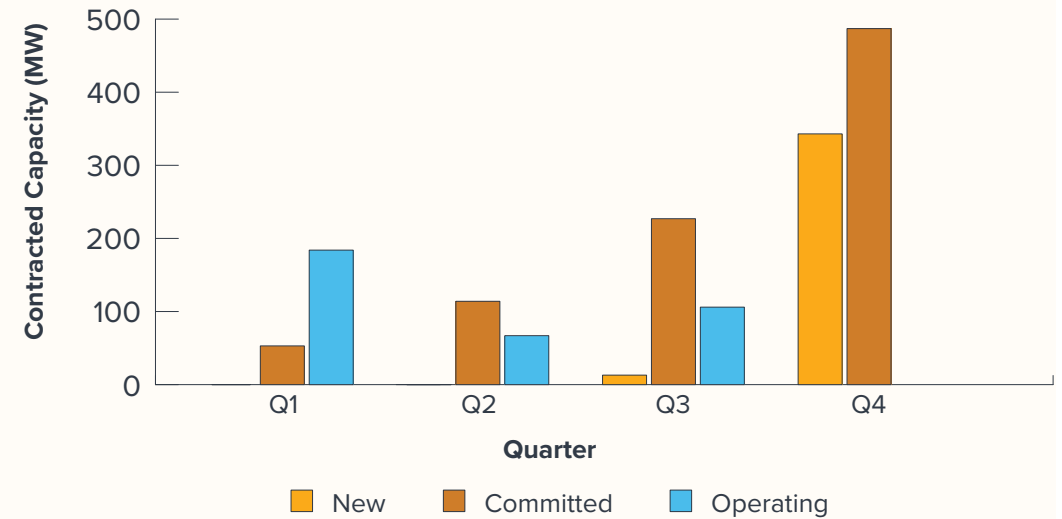
Figure 17: Corporate PPAs, Capacity, Project Stage, 2022 (%)



Source: BRC-A PPA Database 2022

PPAs with financially committed projects about to enter or under construction accounted for over half the capacity contracted by corporate PPAs. PPAs with operating projects represented over 40 per cent of deals but only around 20 per cent of capacity contracted, reflecting the greater proportion of smaller buyers in the market for operating projects.

Figure 18: Corporate PPAs (MW), Project Stage, by Quarter



Source: BRC-A Industry Survey 2022

The low share of Corporate PPAs for new projects appears to primarily reflect wider factors shaping the renewable energy market such as:

- a slowdown in the supply of new projects due to factors such as delays in grid connection;
- Increased risk – and perception of risk – in this context dissuading Corporate PPA buyers from deals with new projects;

There are other structural factors such as the growth in the retail PPA and products market for smaller buyers who prefer shorter-term deals from operational projects.

BEST PRACTICE FOR CORPORATE PPAS?

The low proportion of Corporate PPAs with new projects during 2022 raises questions around environmental ‘additionality’ and the contribution of PPAs to energy transition. A Corporate PPA signed with a new project before it has secured finance for construction is the ‘gold standard’ as it is clearly adding to the stock of renewable energy.

However, Corporate PPAs with operating projects can also indirectly support investment in new renewable energy. For example, if the Corporate PPA is with a retailer that is signing PPAs with new projects and on-selling via Corporate PPAs once the project is operational, the Corporate PPA buyer is indirectly contributing to demand for new renewable energy. ‘Medium-sized’ buyers with loads under 25 – 30 GWh per annum rarely have the scale to contract with a new project, and therefore a PPA with an operating project is often their pathway to buying offsite renewable energy.

Consequently, whilst not every PPA with an operating project would meet a reasonable additionality test, it does not follow that a healthy Corporate PPA market would comprise solely of deals with new projects because that would illustrate there is no pathway for medium-sized buyers. A healthy Corporate PPA

market would include a mix of larger PPAs with new projects and smaller PPAs with operating projects.

The growth in retail PPA models and offers is positive as it increases choice but can also be confusing for buyers when assessing the impact of their purchase. To support buyers negotiate PPAs with higher environmental impact, the BRC-A developed a Best Practice Guide during 2022. 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?

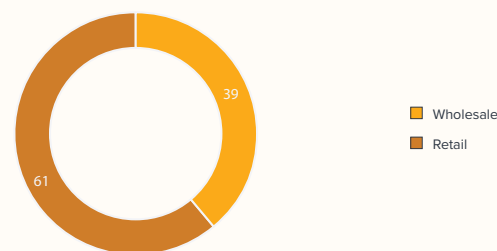
Recognising the differences between larger and small/ medium-sized buyers, the guide contains a spectrum of options on what ‘best’ and ‘better practice looks like for different types of buyers to assist in assessing PPA offers.

THE RETURN OF WHOLESale PPAS

In last year’s SOM, it was observed that there was a strong trend towards retail PPAs – where larger buyers had preferred wholesale PPAs in earlier years they too swung to retail PPAs in 2021. Retail PPAs constituted the majority of both deals and capacity contracted as larger buyers like Woolworths and BHP also signed retail PPAs. This appeared to reflect more attractive pricing, lower firming costs and simpler administration.

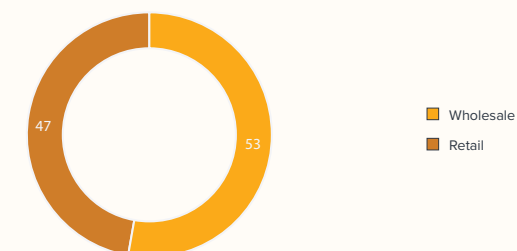
However, the wholesale PPA made something of a comeback in 2022. Around 40 per cent of deals were wholesale PPAs and the majority of capacity contracted was via wholesale PPAs (figure 19). Notably, the increase in electricity base future prices has increased the cost of firming and therefore altered the balance of incentives between wholesale and retail PPAs. Multi-national corporations with experience in wholesale PPAs in other jurisdictions were also active buyers. Larger buyers that negotiated wholesale PPAs in 2022 included Microsoft, BHP, Apple, Mars and Orica.

Figure 19: Wholesale & Retail PPAs, Number of Deals, 2022 (%)



Source: BRC-A PPA Database 2022

Figure 20: Wholesale & Retail PPAs, Market Share (MW), 2022 (%)



Source: BRC-A PPA Database 2022

THE CHANGING LGC MARKET

The LGC market was also volatile and complex during 2022. Whereas the market expectation for some years was that the price of LGCs would inevitably fall under \$10 at some point once the demand for the RET was satisfied, the spot price for LGCs increased from around \$35-\$40 (2021) to \$55-\$60 (2022). LGC prices negotiated directly between parties outside the brokered market including PPAs are not public information but industry sources note prices are lower. There was a notable growth in LGC-only PPAs during 2021 but these were rare in 2022.

The price uplift reflected 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.

Anecdotally, there are different views on the market situations for LGCs. Some industry sources noted challenges in procuring LGCs during the year and expressed concern about organisations with 2025 net zero targets sourcing LGCs, whilst other analysts believe there will be adequate.

There has been growing uncertainty about the LGC market beyond 2030 when the renewable energy target expires. Some parties observed that it was difficult to make long-term commitments due to uncertainty about prices beyond 2030 and the legal mechanism to meet sustainability commitments without LGCs. It was reported that green rights clauses were being drafted to ensure buyers were covered in relation to sustainability commitments. Late in the year, a discussion paper was released on a new renewable energy certification and guarantee of origin scheme to provide a certificate mechanism beyond 2030.

THE EMERGENCE OF 24/7 PPAS?

Greater matching between demand and supply can reduce the requirement for firming, reduce the cost for users and the electricity system and increase energy security.

There is growing movement internationally amongst corporates and governments for '24/7' renewable energy; that is, renewable energy supply that is fully matched to the consumption of the end-user:

- The US government has included a requirement for 50 per cent hourly-matched renewable energy in a tender for 100 per cent renewable energy for its own consumption;
- Major corporations such as Microsoft and Google have committed to targets to reach 24/7 renewable energy;
- The C40 Cities network has launched a 24/7 Carbon-Free Energy for Cities program;

Whilst it is a small market niche at this point, there is also growing interest in 24/7 renewable energy and PPAs within Australia – and a trend to watch.

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.⁴

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:

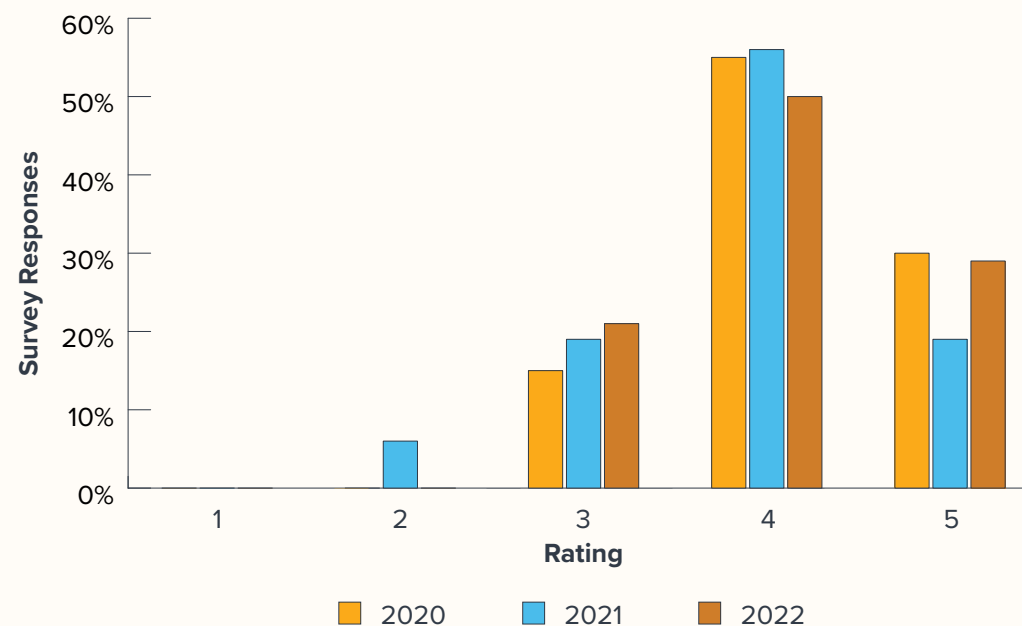
- PPAs remain a challenging undertaking with most buyers rating the difficulty high or very high - though transaction costs are generally rated lower than the difficulty.
- the major barriers to PPA execution are internal to buyer organisations: buyer understanding, complexity and building organisational 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.

⁴ Note the response rate of developers was much lower this year than previous surveys, so developers are generally not included in analysis of the 2022 survey results.

BARRIERS TO CORPORATE PPAS

In our survey, there is little evidence that buyers finding PPAs easier. Buyers continue to report that Corporate PPAs are quite difficult. When asked to rate the difficulty on a scale of 1 (easy) – 5 (hard), the proportions answering 3, 4 and 5 are broadly stable. Around one-quarter answer ‘5’, just over one-half ‘4’ and one-fifth ‘3’ (Figure 21).

Figure 21: How hard are Corporate PPAs?

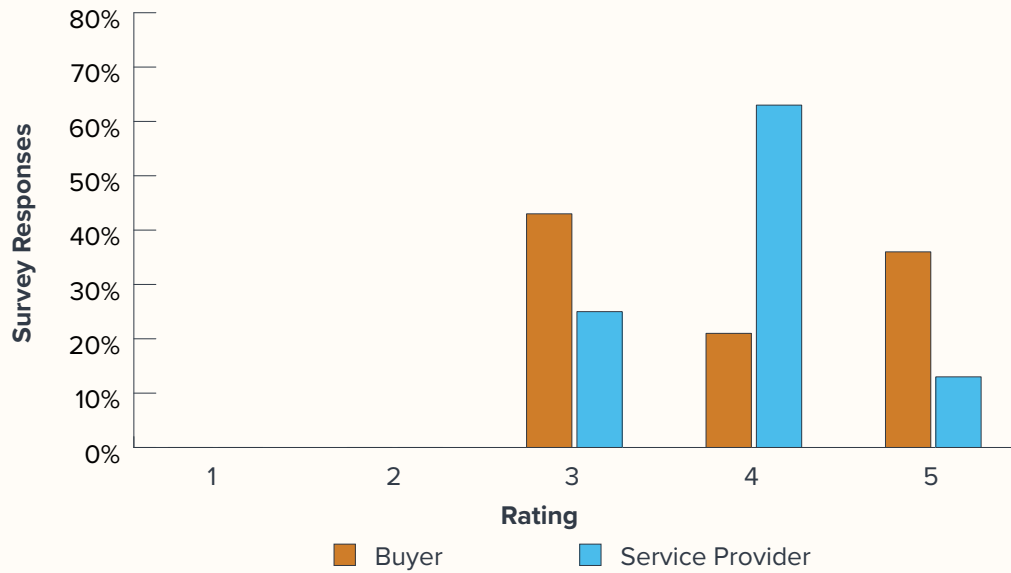


Source: Industry Survey 2022, BRC-A

When asked about transaction costs, more buyers rate the PPA as a '3' than '4' when asked about than the negotiation difficulty (Figure 22).

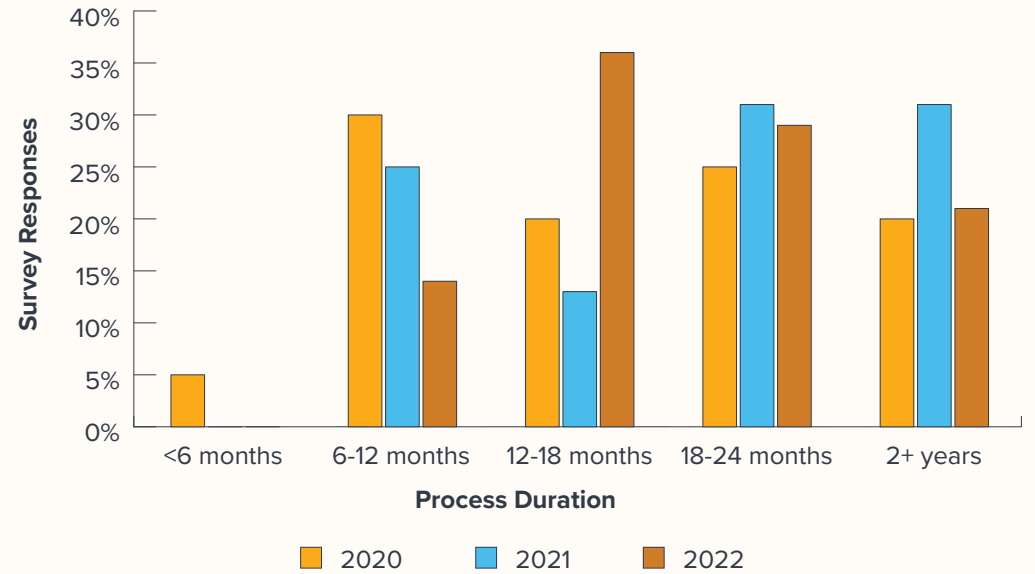
How long do PPAs take? Overall, the number of PPAs being completed fell from past years and there was an increase in particular in deals that took 12 – 18 months. Close to half survey respondents answered the PPA took longer than 18 months (Figure 23).

Figure 22: How high are the transaction costs for Corporate PPAs?



Source: Industry Survey 2022, BRC-A

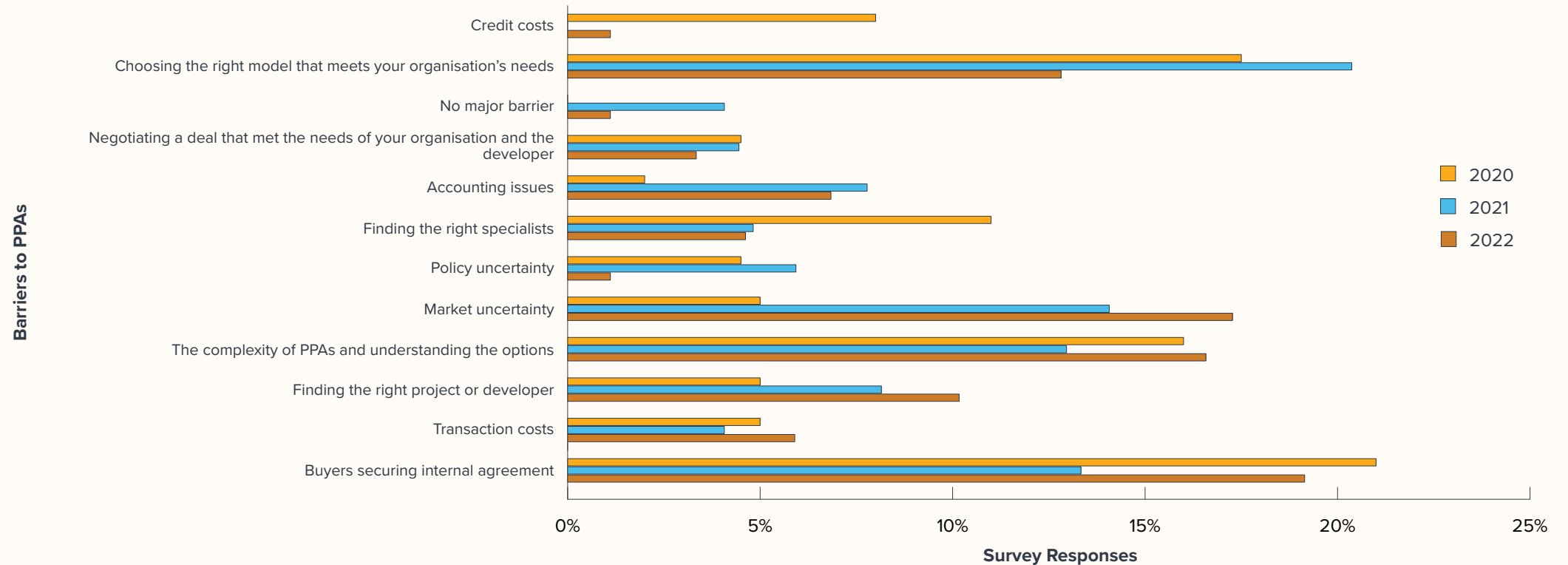
Figure 23: Corporate PPAs, Process Duration



Source: Industry Survey 2022, BRC-A

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

Figure 24: What is the Major Barrier to Corporate PPAs, Buyers, 2020 - 22 (%)?



Source: Industry Surveys, BRC-A

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 bio-diversity. The salience of these issues is assessed by examining:

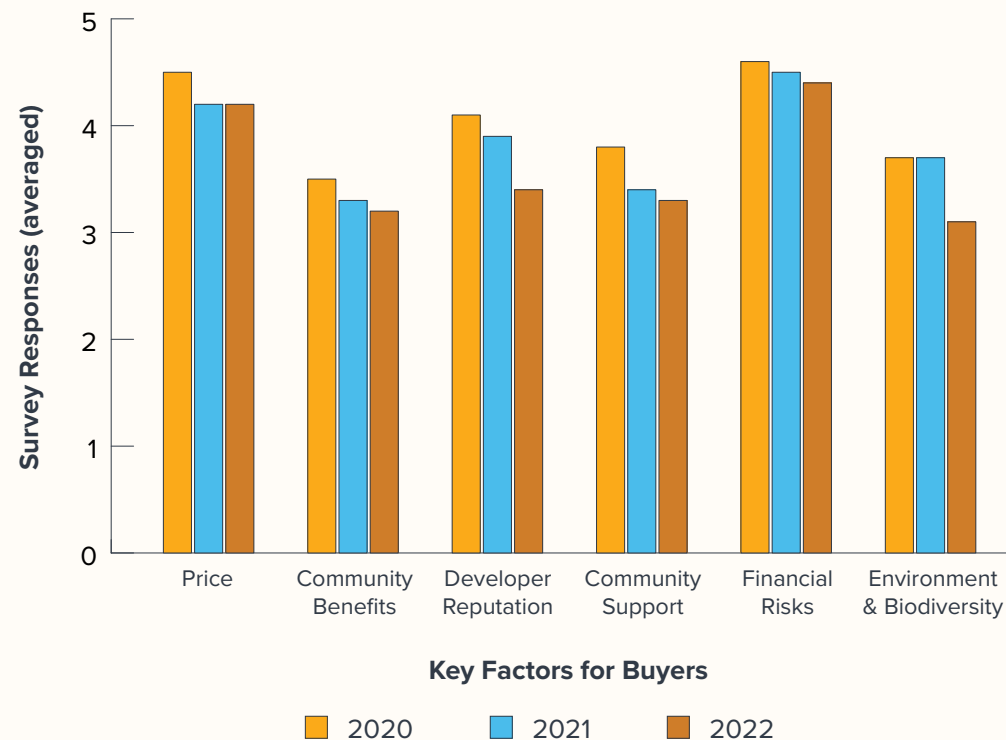
- the average scores for each issue across respondents;
- the proportion of buyers who rank the issue a ‘5’ or ‘4’ to understand how many place great importance on the issue.

In this year’s survey, the average rating for every criteria was lower than the last two years - this year’s survey cohort simply ranks all criteria as less important than past years. This limits the value of comparison with early years.

Nonetheless, there are some useful insights into buyer preferences that can be drawn from the survey data:

Firstly, on average, the top three issues for buyers have been the same in each of the three surveys; in order, financial risks, price and developer reputation.

Figure 25: Key Factors for PPA Buyers, Average Rating, 2020-22

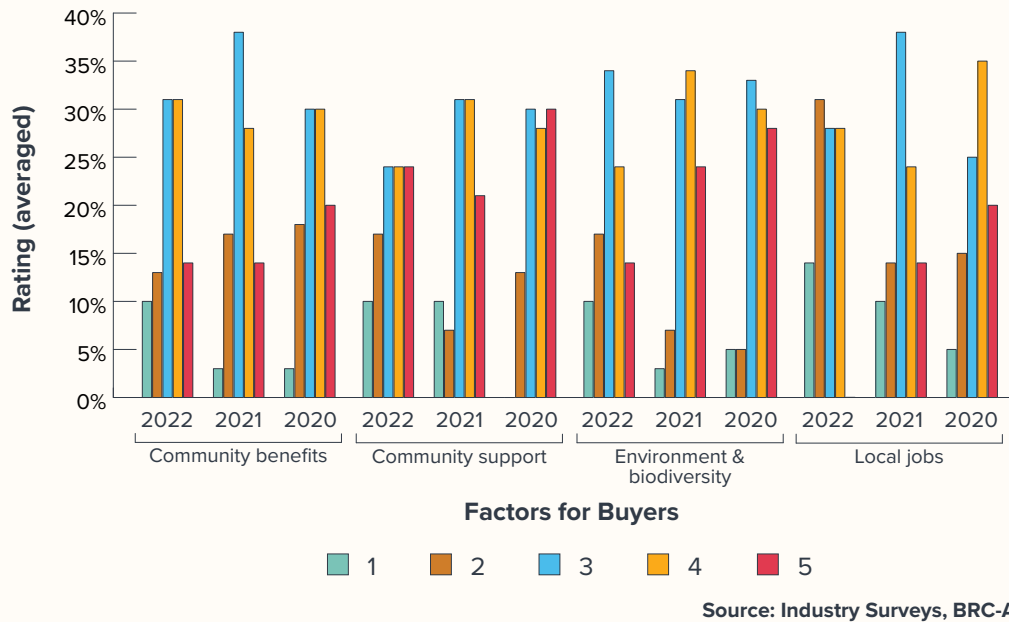


Source: Industry Surveys, BRC-A

On average, community support, community benefits, and environment and biodiversity are ranked lower.

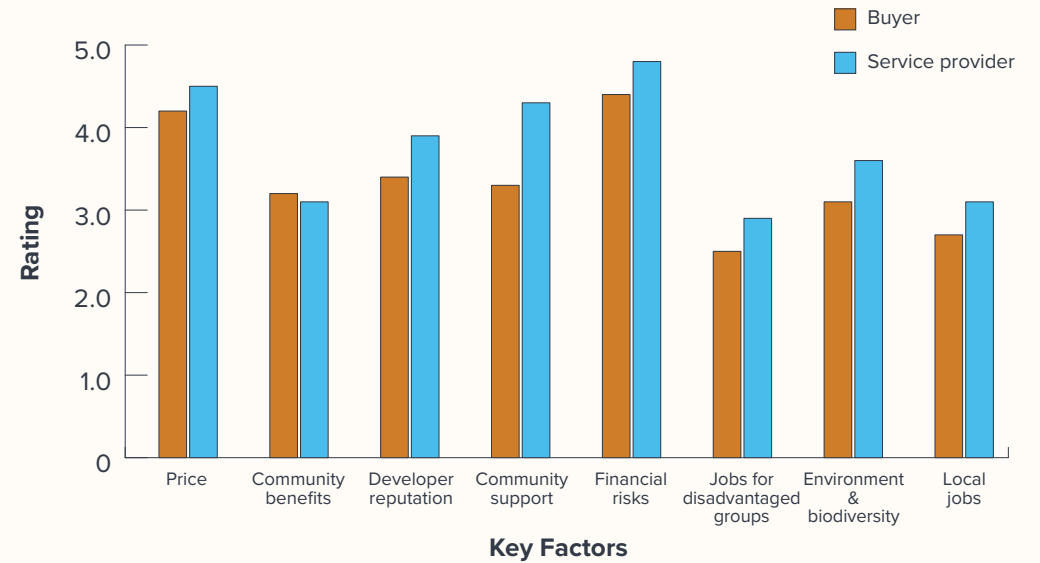
However, there is still a significant minority of buyers that rate these issues as very important. Over the past three years, 40 – 60 per cent of buyers have consistently ranked the social and environmental features as a ‘5’ or a ‘4’ when assessing PPAs (Figure 26).

Figure 26: Buyer Ratings on Social and Environmental Issues, 2020-22



In past years, we have observed that service providers ratings of how buyers view different factors have been broadly well-aligned with the buyer ratings. Notwithstanding the lower ratings across the board by buyers of all criteria, the ratings of service providers are still well-aligned this year.

Figure 27: Key Factors for PPA Buyers, Buyer and Service Provider Ratings, 2022



Unfortunately, the responses of developers were too low to analyse this year, but in past years the survey has also found developers under-estimate the importance of non-price factors such as community support, local jobs and environmental factors to buyers.

Appendix One: BRC-A activities in 2022

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:

- 18 Buyer Members have signed 14 PPAs constituting >700 MW of power contracted and supporting >1,300 MW of projects. 6 of these Members participated in Buyers Bootcamps.
- Seven Buyers Bootcamps have been run, training more than 110 individuals in PPA procurement.
- More than 750 listeners attended BRC-A webinars in 2022.
- The BRC-A online Resource Library has been utilised by ~690 Member users 2,600 times.
- the Project Marketplace has been viewed by Member users 3,300 times.

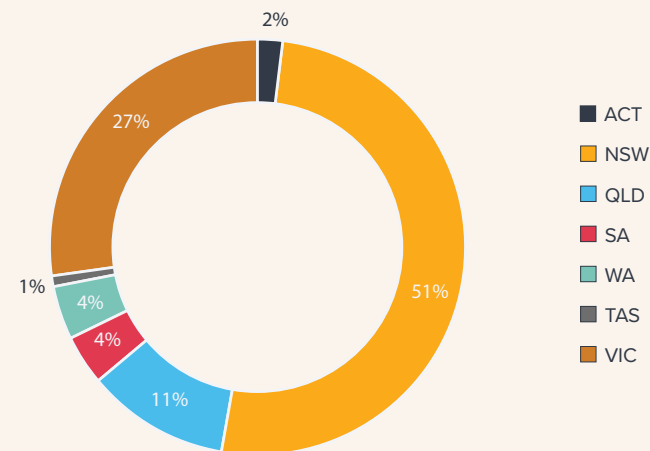
The BRC-A surveyed its members and the broader industry in 2022 to understand their experiences with Corporate PPAs.

Buyers	Developers	Service Providers
37	12	18

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

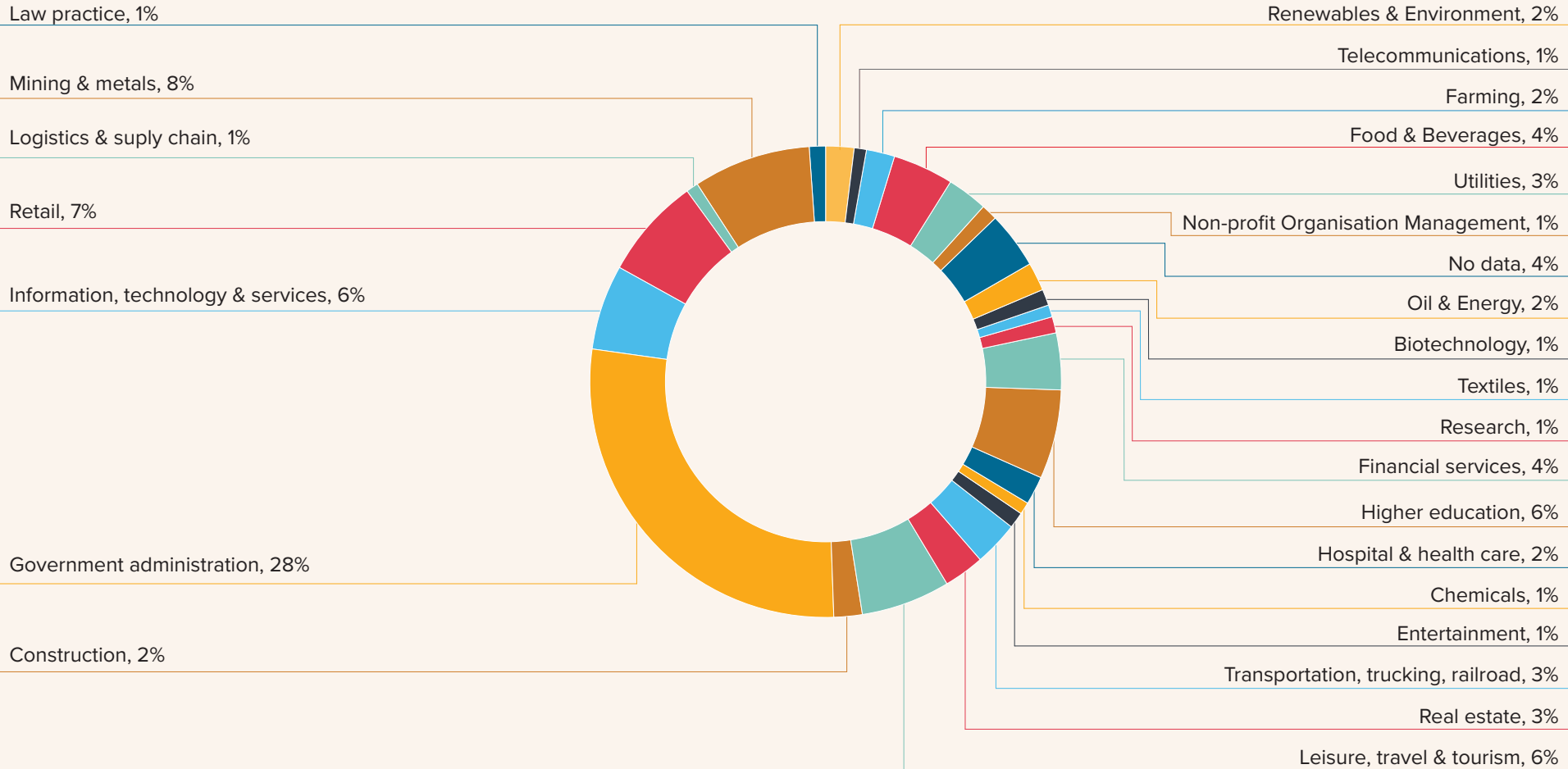
BRC-A Buyer members are drawn from a diverse range of economic sectors, with strong representation among public sector organisations (local and state governments, higher education) and private enterprises spanning mining, metals and resources, food & beverage manufacturing, consumer goods retailers,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

Figure 28: BRC-A Membership, by Region (%)



Source: BRC-A Membership 2022, BRC-A

Figure 29: Economic sector distribution of Buyer members



Source: BRC-A Membership 2022, BRC-A

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-September, 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, and this year ran a virtual instalment in late August which involved the US Renewable Energy Buyers Alliance and experienced Australian PPA buyers conveying insight to renewable energy Developers operating in Australia on maximising RFP chances of success, understanding the buyer's journey and tips on how best to differentiate their offering.

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. A developer webinar for buyers to hear their perspectives was held as was a webinar on the Cities Power Partnership for councils.

In addition to contributing to the CEC's Large-scale Solar Forum 2020 Webinar Series and others hosted by the Smart Energy Council and Australian Industry Group, in 2020 the BRC-A continued its annual webinar series, Buying Power, which saw the following topics covered (which amassed over 750 attendees in total):

- **Buying Power 1:** *Best Practice for Corporate PPAs Guide.*
- **Buying Power 2:** *How will the current electricity market affect your decision to contract renewables?*
- **Buying Power 3:** *LGC Price Trends & Future of the RET.*
- **Buying Power 4:** *Mapping the Road to 100% Renewables*

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 2022, the Marketplace Platform contained:

- 88 renewable energy projects
- 14.5 GW of total capacity

BRC-A RESOURCES

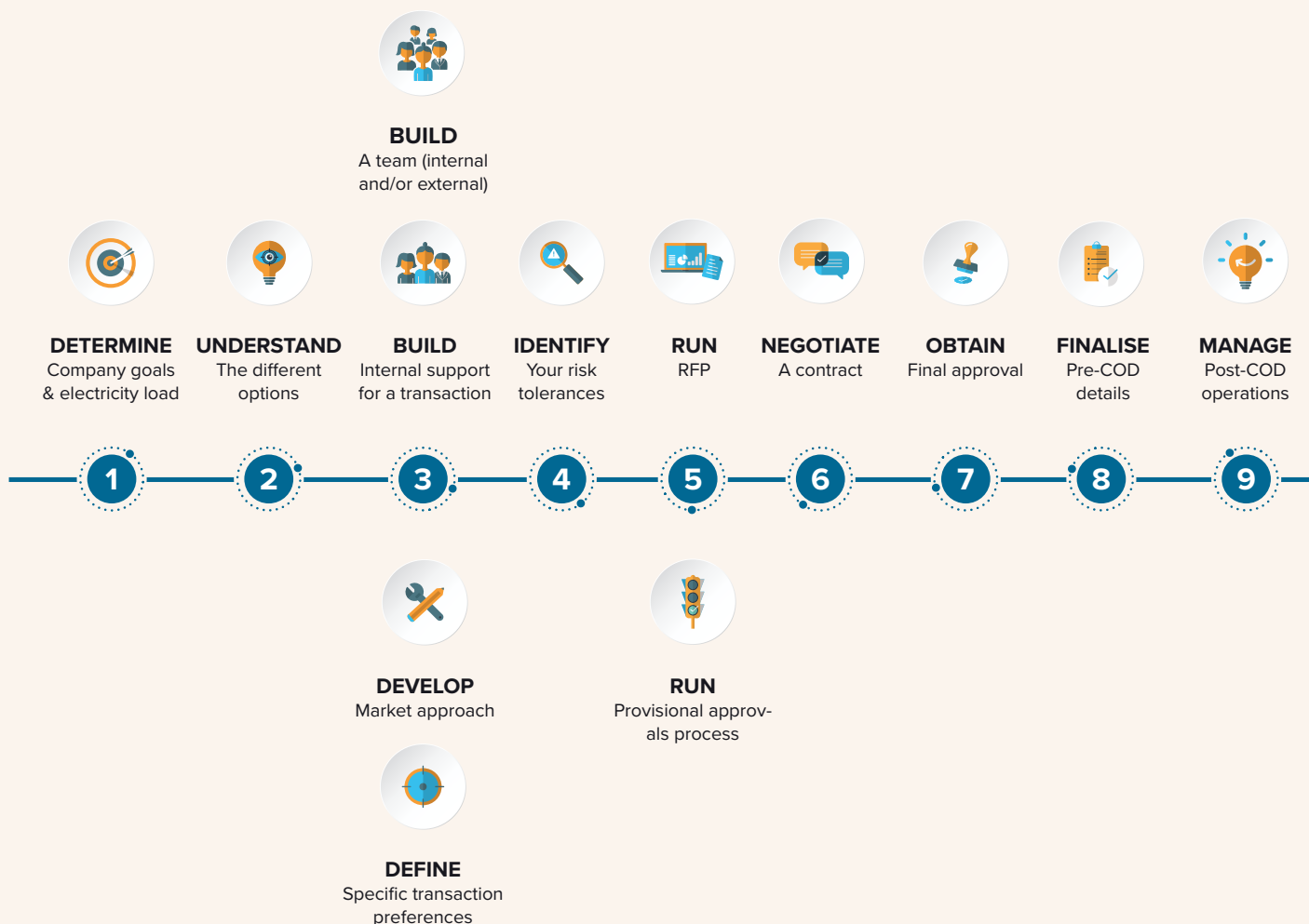
The BRC-A is developing and adapting a range of primers, guides, tools and templates from the US for the Australian market. The centrepiece for BRC-A resources is the Buyer's Roadmap, which includes a step-by-step guide to Corporate PPA procurement with supporting resources for each step of the process.

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 30: BRC-A Buyer's Roadmap



Source: BRC-A Member Portal 2022, BRC-A

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.
- Jomo Owusu, Ernst & Young.
- Karina Jewell, Nectr.
- Liam Henderson, City of Melbourne.
- Liam Reid, Lightsource bp.
- Liz Fletcher.
- Mariette Barnard, Schneider Electric.
- Marilyne Crestias, Renewable Energy Insights Pty Ltd.
- Nicholas Bell, World Kinect Energy Services.
- Olena Kozak-King, Octopus Investments.
- Pip Harley, NSW Ports.
- Rajesh Lekhwar, BOC Limited.
- 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

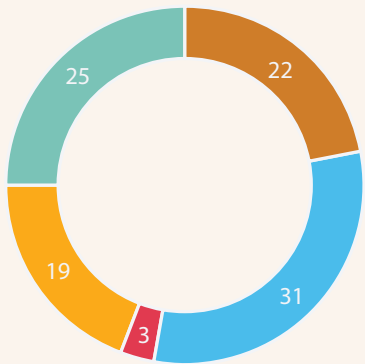
The survey captured a range of annual electricity loads, with 44% being large or very large consumers (≥ 50 GWh p.a.), and a growing, now majority, segment of small and mid-sized buyers (<50 GWh p.a.) constituting the remainder. There is significant load among Buyers that are currently pursuing or investigating 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.

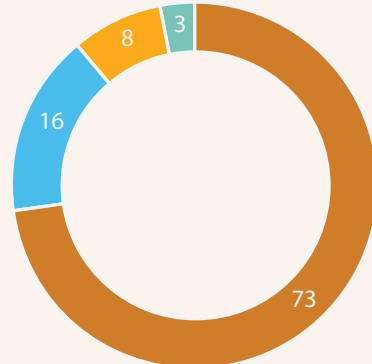
Figure 31: Buyer respondent annual electricity loads (%)



0-15 GW 15-30 GW 30-50 GW
50-200 GW 200+ GW

Source: Industry Survey 2022, BRC-A

Figure 32: Buyer respondent employee count (%)

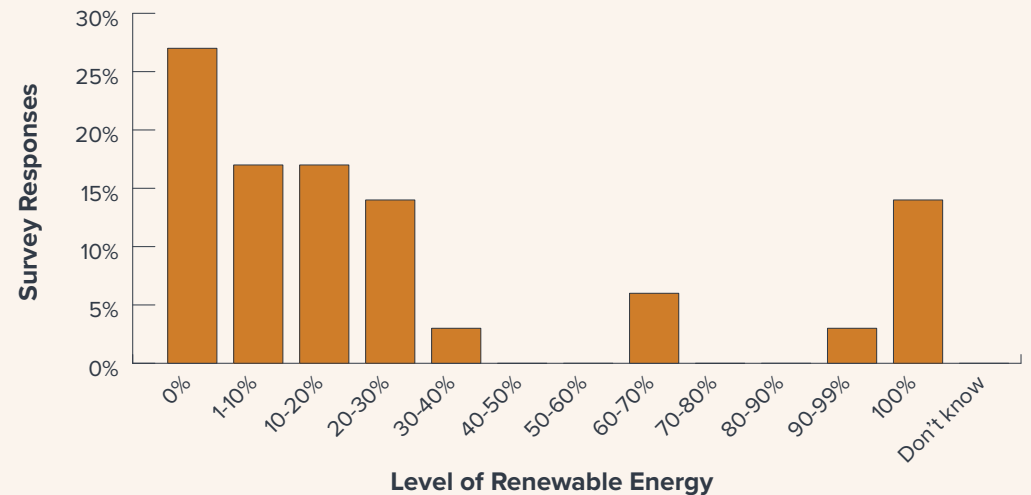


500+ 100-499 20-99 1-19

Source: Industry Survey 2022, BRC-A

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 33: Buyer respondents' current level of renewable energy (%)



Source: Industry Survey 2022, BRC-A

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"/> 10-20% |
| <input type="checkbox"/> 1-10% | <input type="checkbox"/> 20-30% |

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

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?

- | | |
|---|----------------|
| 1. Insufficient cost savings | 3. Too risky |
| 2. Long terms unsuitable for our organisation | 4. Too complex |
| | 5. Other |

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?

- 1
- 2
- 3
- 4
- 5

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

- Business case and internal stakeholder support
- Investigating/assessing options
- Procurement process
- Negotiation

What were the 3 major barriers you experienced?

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

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

- 1
- 2
- 3
- 4
- 5

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?

- Most familiar
- Less complexity
- Risk management
- Financial/price
- Transaction costs
- Legal or accounting issues
- Impact/sustainability/PR
- Other

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

- 1
- 2
- 3
- 4
- 5

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

- 1
- 2
- 3
- 4
- 5

The *developer's reputation*?

- 1
- 2
- 3
- 4
- 5

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

- 1
- 2
- 3
- 4
- 5

Financial risks?

- 1 4
- 2 5
- 3

Jobs and other benefits for disadvantaged groups*?

- 1 4
- 2 5
- 3

Impacts on local environment and biodiversity?

- 1 4
- 2 5
- 3

Local employment and industry?

- 1 4
- 2 5
- 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?

- Electricity price certainty Brand leadership
- Lower electricity prices Corporate Social Responsibility goals
- Greenhouse emissions or renewable energy targets 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 other energy projects
- Focussing on core business Other

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

- We are in negotiations with project developers
- We have issued or are about to issue a Request for Proposal
- We are currently assessing the business case for an PPA
- 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 Strategies for securing internal support
- Options assessment Template documents (e.g. RFPs, term sheets)
- Economic or financial aspects Strategies for aggregated deals
- Legal and/or accounting issues
- Electricity markets pricing

What are the major barriers you have encountered to date?

- Choosing the right model that meets your organisation’s needs
- Internal agreement or commitment
- Understanding of electricity markets and pricing
- Transaction costs
- Legal or accounting standards
- Finding the right project or developer
- Finding the right specialists to support you
- Market uncertainty
- Policy uncertainty
- 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 4
- 2 5
- 3

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

- 1 4
- 2 5
- 3

The developer’s reputation?

- 1 4
- 2 5
- 3

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

- 1 4
- 2 5
- 3

Financial risks?

- 1 4
- 2 5
- 3

Jobs and other benefits for disadvantaged groups?

- 1 4
- 2 5
- 3

Impacts on local environment and biodiversity?

- 1 4
- 2 5
- 3

Local employment and industry?

- 1 4
- 2 5
- 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?

- Electricity price certainty
- Lower electricity prices
- Greenhouse emissions or renewable energy targets
- Brand leadership
- Corporate Social Responsibility goals
- Other

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

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

Is your organisation a BRC-A Member?

- Yes
- No
- I don't know

What was your primary reason for joining?

- Education and training
- Networking and industry connections
- Access to the marketplace platform
- Making connections with buyers
- Making connections with developers
- Events

DEVELOPERS

How many persons does your organisation employ?

- 1-19
- 20-99
- 100-499
- 500+

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

- 0-100 MW
- 100-500 MW
- 500-1000 MW
- 1000-2000 MW
- 2000+

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

- 0-100 MW
- 100-500 MW
- 500-1000 MW
- 1000+ MW

In which states do you have operating projects?

- NSW
- VIC
- QLD
- SA
- TAS

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?

- < 6 months
- 6-12 months
- 12-18 months
- 18-24 months
- 2+ years

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

- 1
- 2
- 3
- 4
- 5

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

- Helping buyers assess options
- EOIs
- RFPs
- Negotiation
- Other

What were the major barriers you experienced?

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

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

- 1
- 2
- 3
- 4
- 5

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

- 1
- 2
- 3
- 4
- 5

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

- 1
- 2
- 3
- 4
- 5

Developer reputation?

- 1
- 2
- 3
- 4
- 5

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

- 1
- 2
- 3
- 4
- 5

Financial risks?

- 1
- 2
- 3
- 4
- 5

Jobs and other benefits for disadvantaged groups?

- 1 4
- 2 5
- 3

Impacts on local environment and biodiversity?

- 1 4
- 2 5
- 3

Local employment and industry?

- 1 4
- 2 5
- 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?

- We are in negotiations with project buyers
- We have responded or are about to respond to a Request for Proposal
- We are currently searching for RE PPA off-takers
- We are investigating the feasibility of a RE PPA

What are the major barriers you have encountered to date?

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

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

- Educating buyers Strategies for aggregated deals
- Connections with buyers Lower transaction costs
- Template documents (e.g. RFPs, term sheets) Other

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

- 1 4
- 2 5
- 3

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

- 1 4
- 2 5
- 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?

- The transaction costs are too high
- There are insufficient buyers at the right scale for our project
- There is not interest from buyers at the moment
- Other

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

- Increase
- Decrease
- No change
- Don't know

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
- Other

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

1. Less scope for cost savings
2. Focussing on core business
3. Other

Is your organisation a BRC-A Member?

- Yes
- No
- I don't know

What was your primary reason for joining?

- Education and training
- Networking and industry connections
- Access to the marketplace platform
- Making connections with buyers
- Events

SERVICE PROVIDERS

How many persons does your organisation employ?

- 1-19
- 20-99
- 100-499
- 500+

What type of services do you provide?

- Accounting
- Financial
- Legal
- Corporate Strategy/marketing
- Energy advice
- Sustainability advice
- Other

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

- Our organisation has provided services for a PPA
- 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?

- < 6 months
- 6-12 months
- 12-18 months
- 18-24 months
- 2+ years

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

- 1
- 2
- 3
- 4
- 5

What are the major barriers experienced in PPA transactions?

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

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

- 1
- 2
- 3
- 4
- 5

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

(5 = extremely important, 1 = not important at all)

- 1
- 2
- 3
- 4
- 5

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

- 1
- 2
- 3
- 4
- 5

The developer's reputation?

- 1
- 2
- 3
- 4
- 5

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

- 1
- 2
- 3
- 4
- 5

Financial risks?

- 1
- 2
- 3
- 4
- 5

Jobs and other benefits for disadvantaged groups?

- 1
- 2
- 3
- 4
- 5

Impacts on local environment and biodiversity?

- 1
- 2
- 3
- 4
- 5

Local employment and industry?

- 1
- 2
- 3
- 4
- 5

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?

- Increase
- Decrease
- No change
- 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?

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

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

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

Is your organisation a BRC-A Member?

- Yes
- No
- I don't know

What was your primary reason for joining?

- Education and training
- Networking and industry connections
- Access to the marketplace platform
- Making connections with buyers
- Making connections with developers
- Events
- Other

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

- When buyers are seeking to understand the electricity market and how PPAs work
- When buyers are assessing options
- When developers are seeking connections/advice
- EOIs
- RFPs
- Negotiation
- 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)

- 1
- 2
- 3
- 4
- 5

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?



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