BUSINESS RENEWABLES CENTRE AUSTRALIA

Renewable Power Purchase Agreements (PPAs)

Chris Briggs

Industrial Net Zero

17 September 2025

Acknowledgement of Country

We acknowledge that today we meet on many Aboriginal lands.

We acknowledge the traditional custodians of the lands and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work.

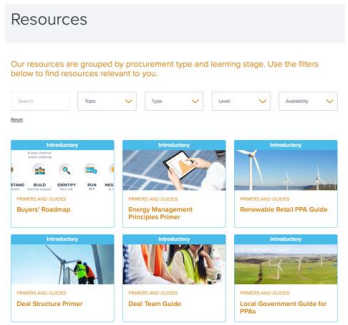
Nikita Ridgeway

About Business Renewables Centre Australia

Business Renewables Centre-Australia provides independent training, connection and fundamental ‘how to’ resources to companies seeking to decarbonise their business through renewable energy procurement, especially via PPAs. We have been helping industry to better understand buying options, Australian energy markets and policy since 2018.

We are a member-led, not-for-profit community of business. We train and support corporate and government energy buyers, project developers and professional service providers seeking to driving industry towards sustainable energy use and net zero emissions.

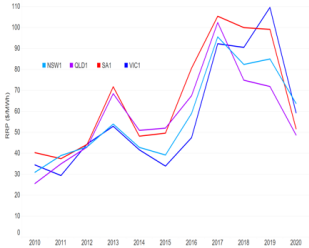
Training



Templates & Guides

Connection

Consultant lists



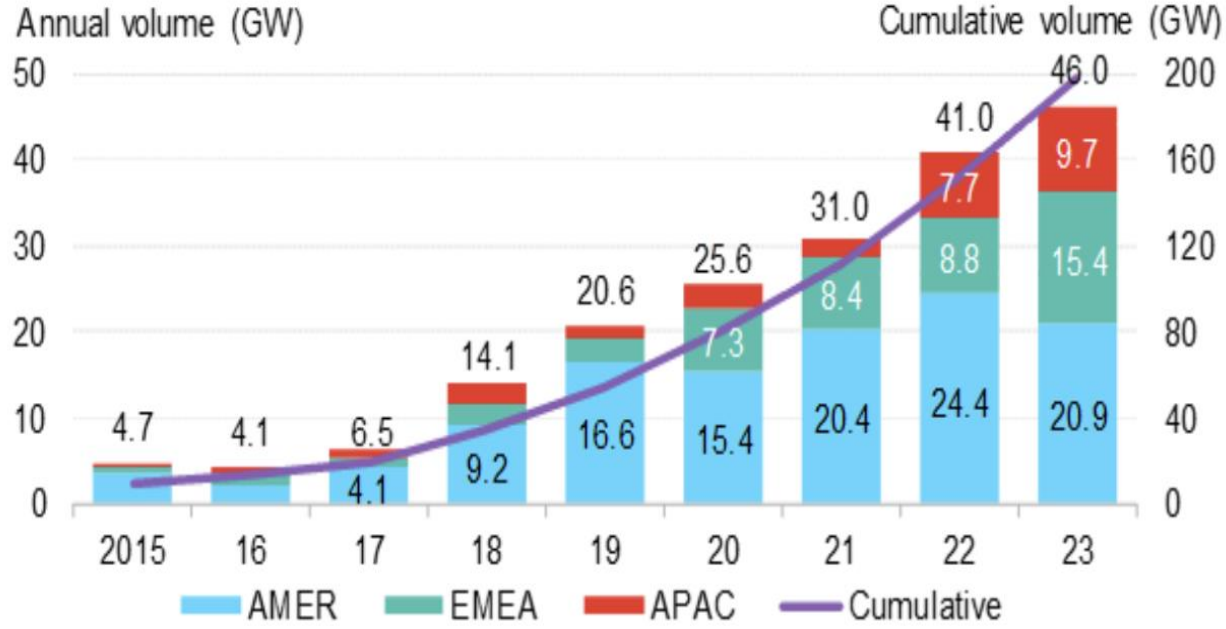
Markets & policy

To find out more visit: www.businessrenewables.org.au

Introduction

1. **Overview of Corporate PPAs: models & drivers**
2. **Current market trends**
3. **The Capacity Investment Scheme (and the NEM Review): the future for Corporate PPAS**

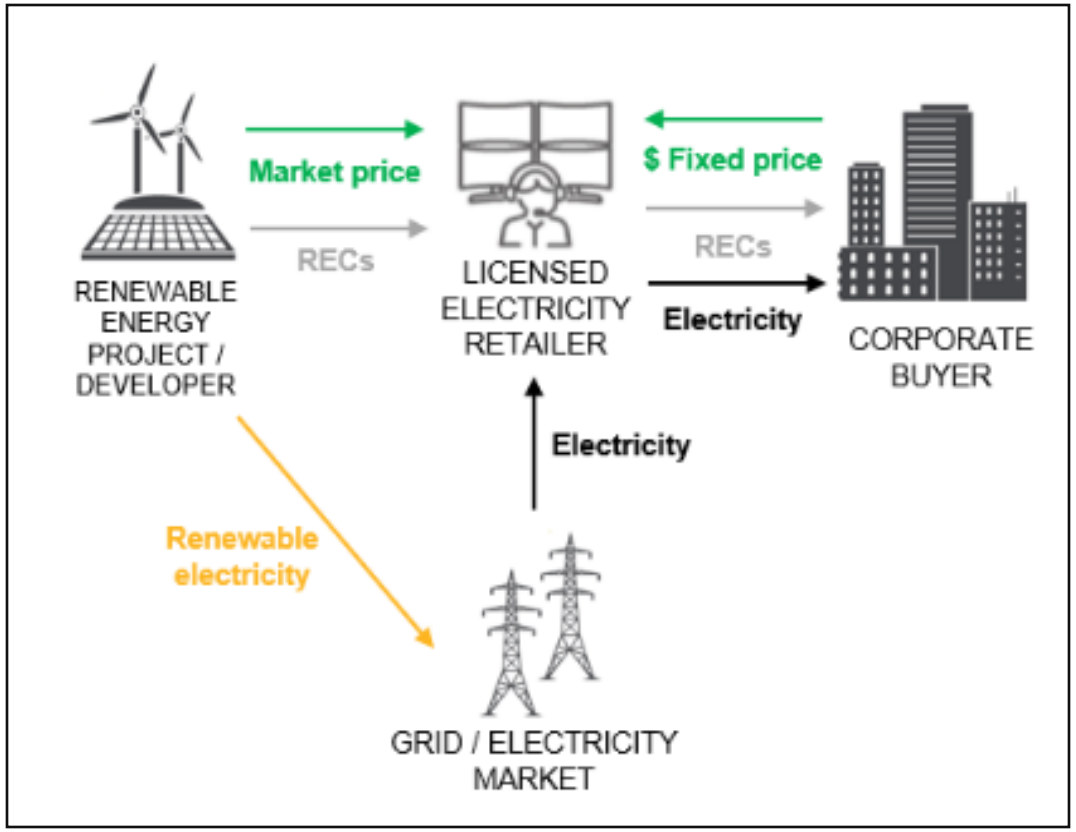
Figure 1: Corporate power purchase agreement volumes, by region



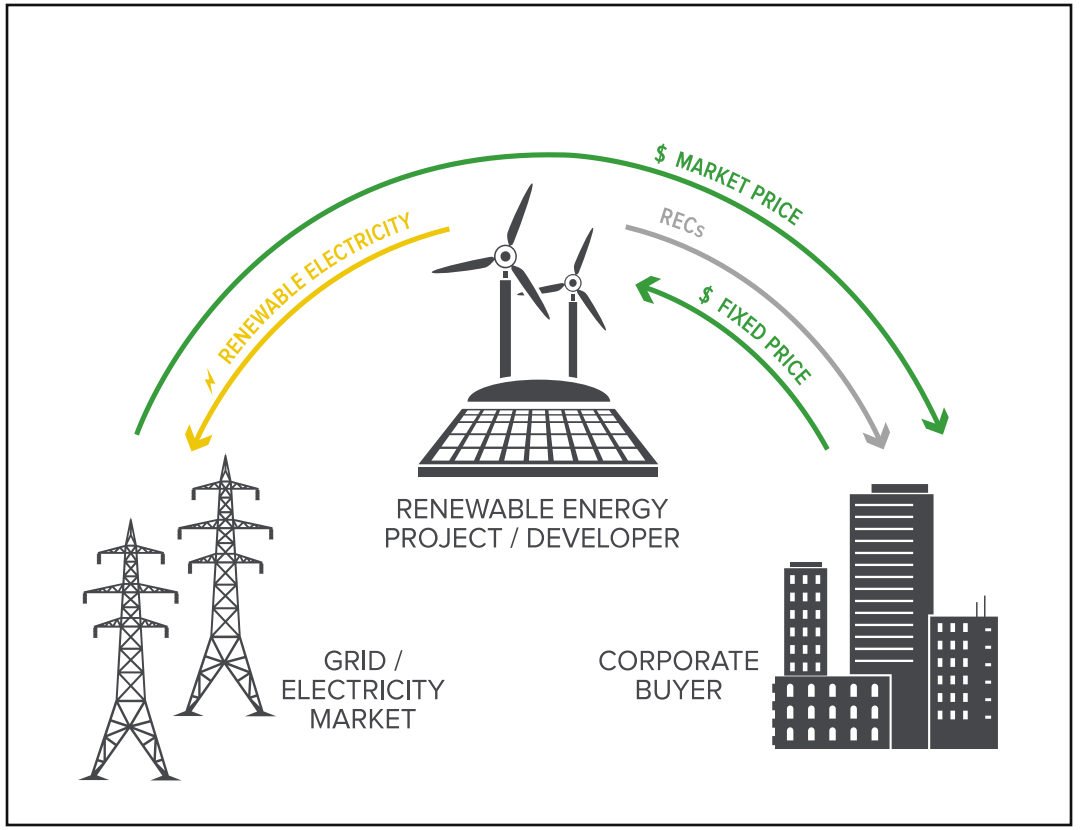
Source: BloombergNEF Note: Chart is for offsite, publicly disclosed deals only and may be subject to change as more information is made publicly available. Capacity is in GW DC.

Understanding PPA types

Retail PPA



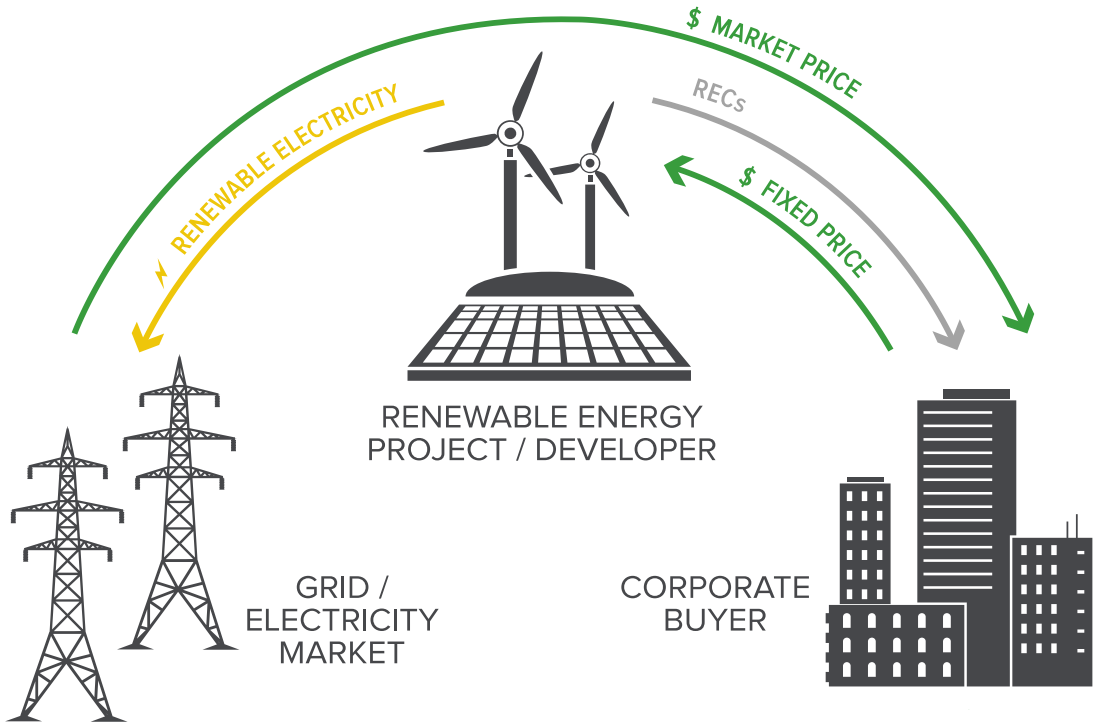
Wholesale PPA



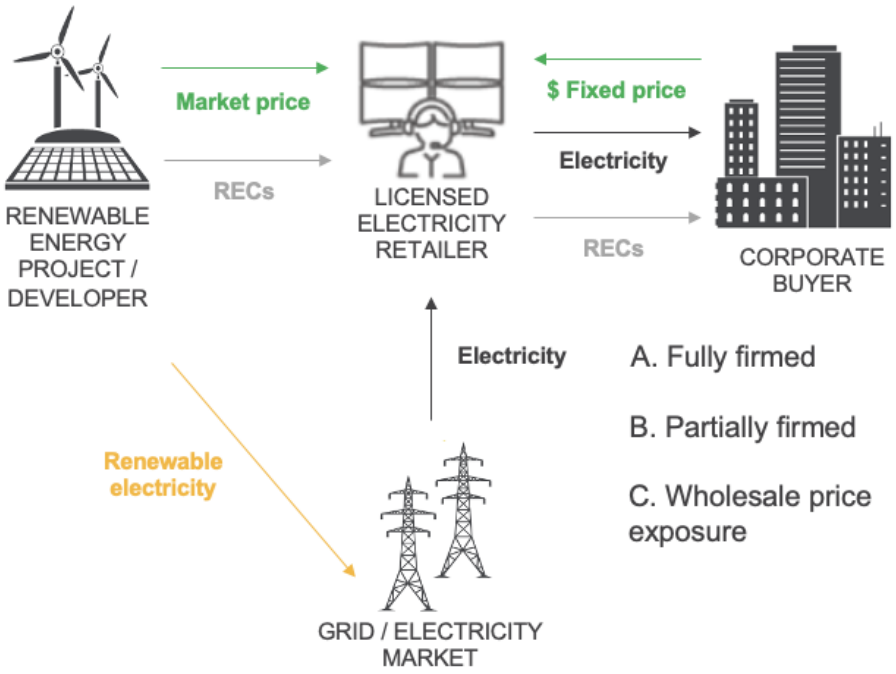
Wholesale PPAs – aka ‘Finance PPA’ or ‘Contract for Difference’

Key features

- Direct contract with wind/solar farm.
- Separate to electricity bill or physical consumption of energy.
- Variable volume (linked to production).
- Priced as a swap (pay fixed price, receive floating price).
- Generally >10 years.
- Transaction costs can be lower by avoiding negotiations with retailers and integration of retail contracts across sites.
- Generally suited to buyers with load greater than 50GWh pa.
- Finance for new solar or wind farm projects.
- Contract sits separately from your retail supply contract.



Retail PPAs



Key features

- A retailer acts an intermediary between the Buyer and the renewable energy developer.
- Integrated into electricity bill and connected to physical consumption of energy.
- Generally, 5 – 10 years contract.
- Costs vary with level of firming.
- Generally suited to buyers with load greater than 5GWh pa.
- Replaces your retail supply contract for the portion of electricity that you contract.

Case Study: Molycop Australia

- Retail PPA with retailer Flow Power for 100 GWh p.a.
- 10-year deal.
- Bomen Solar Farm and the Sapphire Wind Farm, NSW.
- Spot-price exposed PPA.
- Covers around 50% of Molycop's NSW electricity consumption.

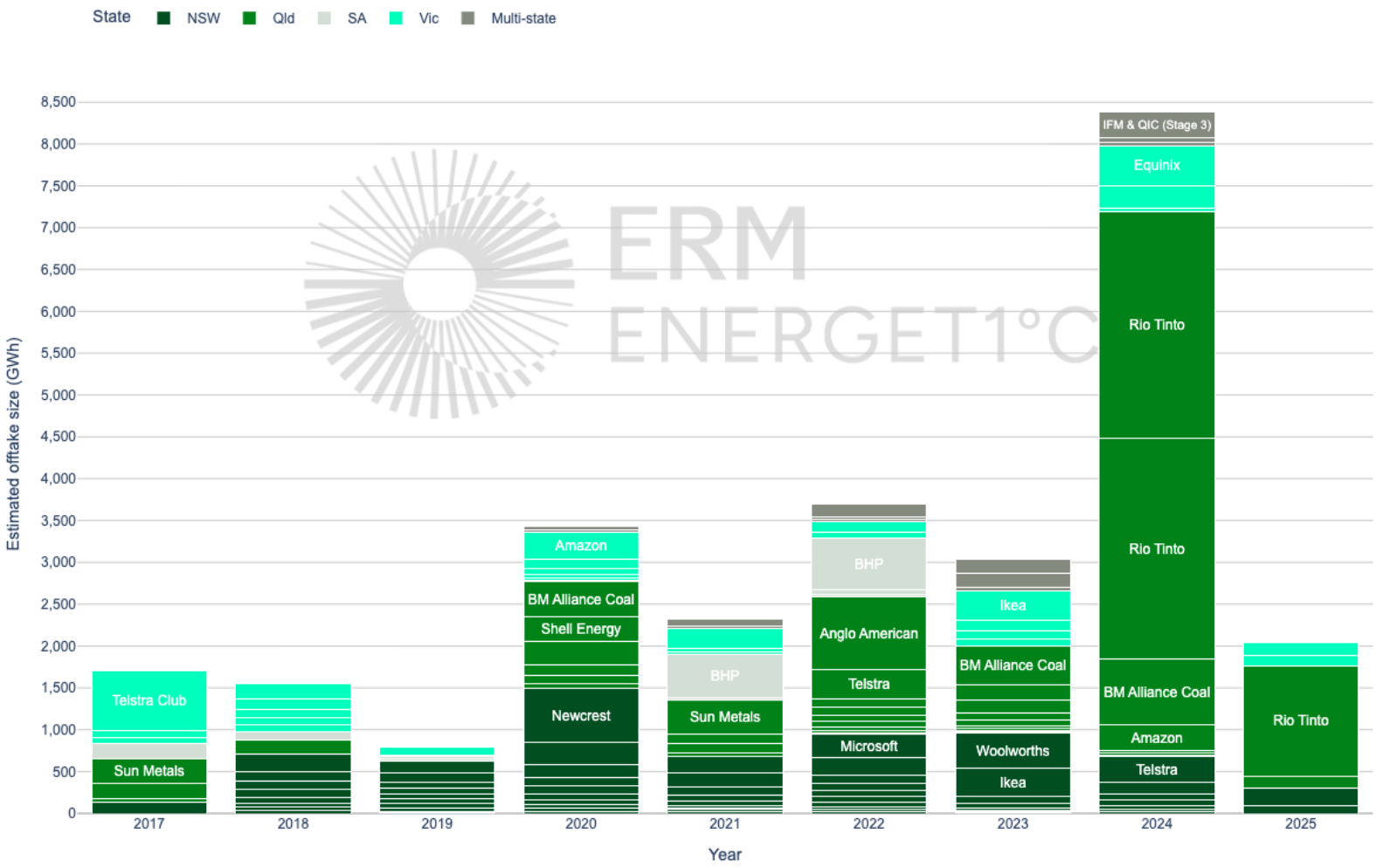
Who is buying renewable electricity via corporate PPA?

Who is doing renewable PPAs:

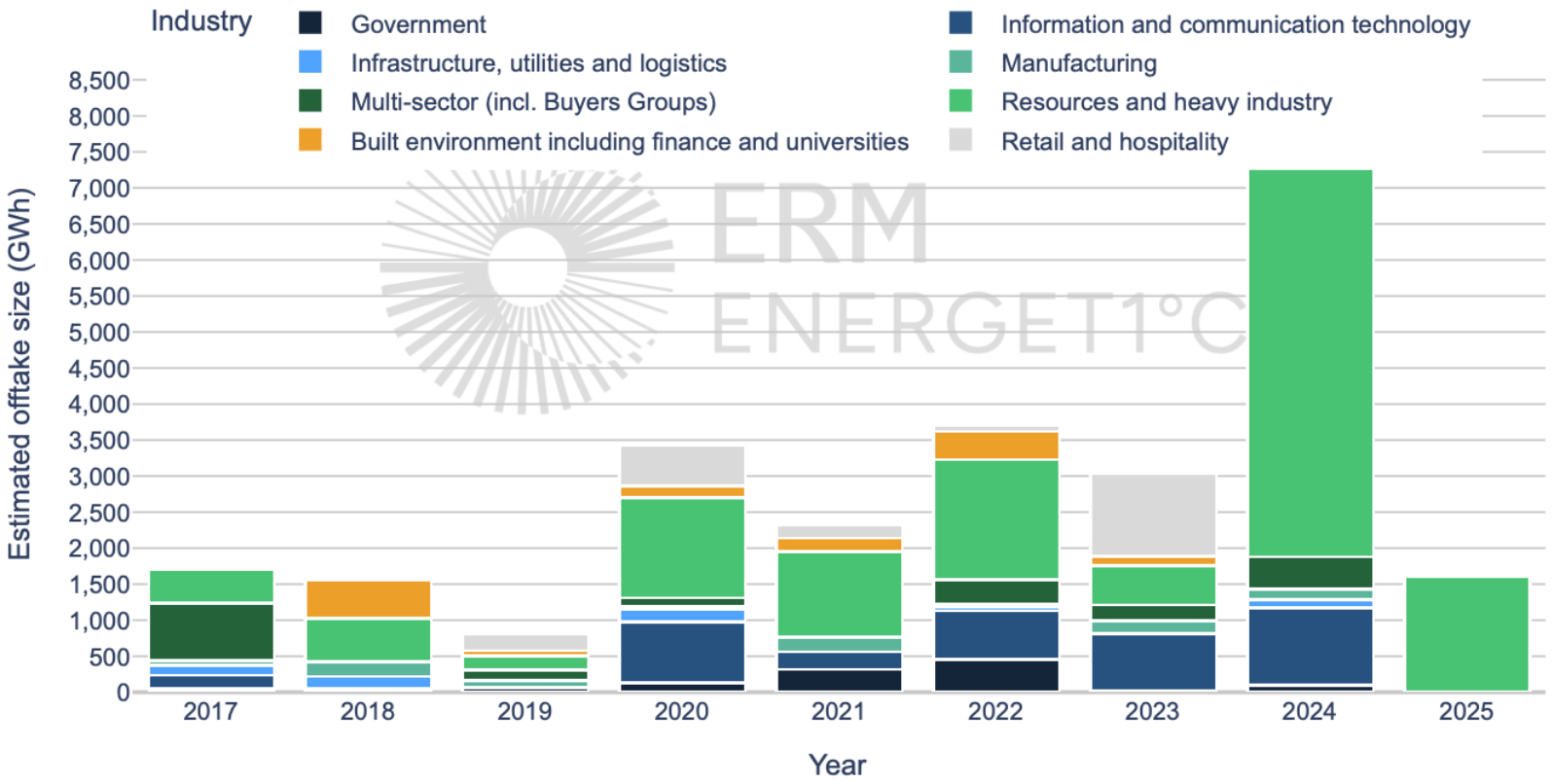
- Biggest year for Corporate PPAs in 2024 – slower year in 2025
- Queensland has been the leading state for Corporate PPAs followed by NSW and Victoria

So far in 2025:

- Rio Tinto
- BOC South Pacific
- Amazon
- Newcastle Coal Infrastructure Group
- University of Technology Sydney



Who is buying renewable electricity via corporate PPA?



Resources and Heavy Industry the largest buyer of PPA's – especially in recent years.

Corporate Renewable PPAs – the Drivers

Why are renewable energy PPAs valuable to industry?

Renewable PPAs enable renewable projects to be financed as they are a bankable contract developers can use to obtain project finance; and offer a range of benefits to organisations.

Achieve large emissions reductions quickly

Net Zero – Scopes 1, 2 & 3

Deliver budget certainty

Manage ongoing price volatility as market decarbonises

More than just green electricity

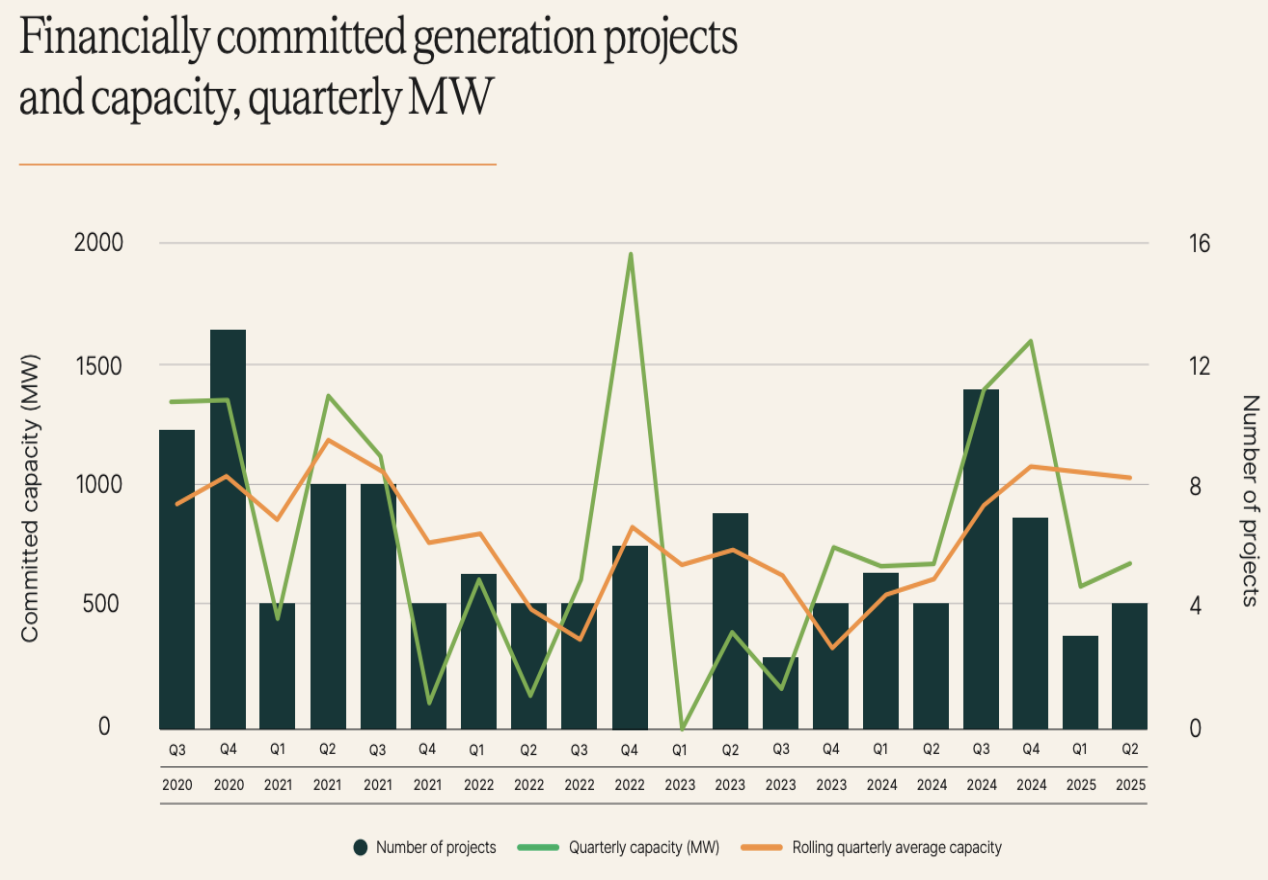
Deliver regional benefits

Corporate PPAs support the decarbonisation of Australian business and the electricity grid by providing financial certainty for renewable energy projects.

02

Current market trends

Renewable Energy Market Dynamics



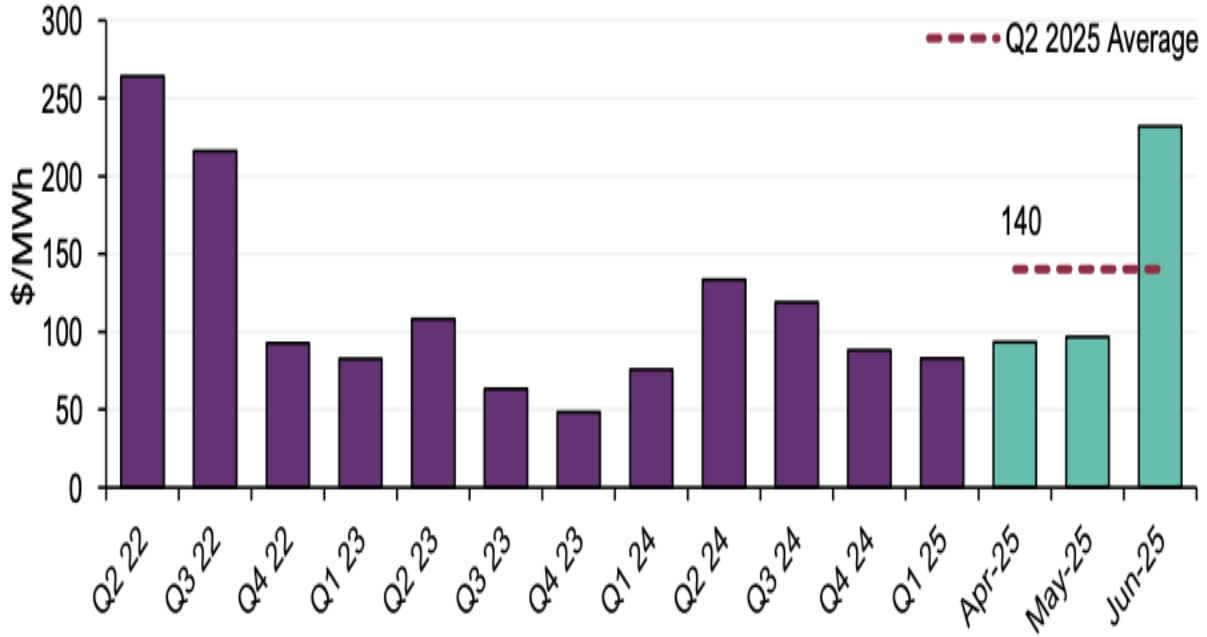
Source: Clean Energy Council, Renewable projects quarterly report, Q2 2025.

- Volume of renewable energy projects reaching financial closure accelerated in recent years
- Record volume connected to the grid in 2024 and supply still coming from projects going through commissioning to full operation
- Slowdown in projects reaching financial closure in 2025 – no wind projects
- Large volumes of utility-scale battery storage under construction
- Not on track to add the estimated 6GW p.a. required to meet 82 per cent target – large project pipelines, policy geared to remove blockages to get projects through the pipeline

Electricity market dynamics

Figure 10 Year-on-year increase (+5%) in NEM average wholesale spot prices

NEM average wholesale electricity spot prices – quarterly since Q2 2022



- Volatile prices: rising wholesale prices, higher/longer price spikes & more common negative price intervals
- The 'messy middle' phase of the energy transition: High uncertainty about forward prices with cross-currents that could lower prices (new supply, battery storage etc) or increase prices (e.g. coal closures, outages etc)
- Declining liquidity in instruments (e.g. baseload futures) that have been used to manage risk (which could worsen as coal plants continue to age)?
- New instruments emerging (e.g. ASX just launched new morning and evening peak products)

Source: Australian Energy Market Operator, Quarterly Energy Dynamics, Q2 2025.

Corporate PPA Market dynamics – quiet before the storm?

Supply-demand balance in Corporate PPA market

- Post-2020: buyers market as projects chased PPAs
- Pre-2025: sellers market as buyers approached 2025 amidst falling supply
- Current situation: unstable and uncertain
  - Growing number of projects in market seeking offtake
  - Corporate PPA demand volumes are up – but small number of deals by very large buyers have masked lower overall deal activity
  - Strong buyer demand that was driven by 2025 targets ran its course - buyers have some time before 2030
  - Gap in price expectations between buyers and projects - higher prices after supply-chain inflation (especially wind)

Difficult choices for buyers

- Wait for PPA prices to fall as renewable and battery supply improves?
- Time-to-market risk e.g. price shocks from coal outages, exits
- Risk of waiting/intense competition as 2030 approaches
  - Lots of buyers with 2030 targets
  - Existing buyers with 2030 PPAs expiring will be back in market
  - Delays (e.g. grid connection) could impact on achievement of 2030 targets

03

The Capacity Investment Scheme and Corporate PPAs

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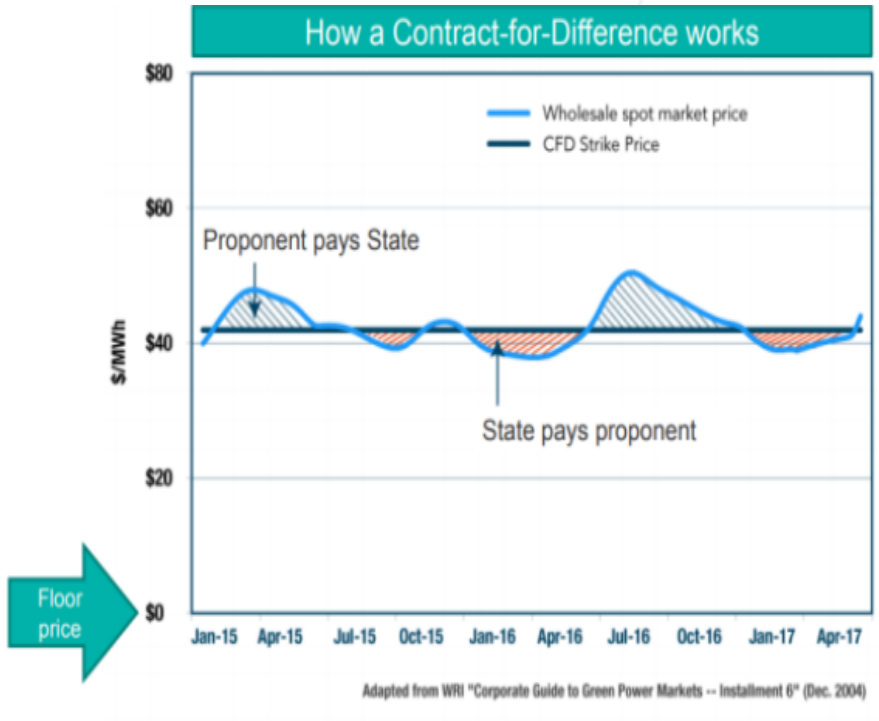
The Capacity Investment Scheme: Government Auctions 2.0

Fixed-Price Contracts-for-Difference (CfD)



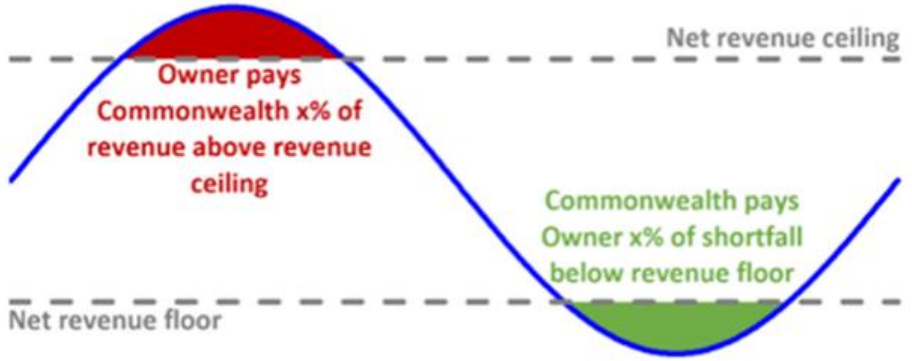
Where: ACT, Victoria

Model: RE project gets guaranteed revenue from government CfD, project doesn't participate in market

Relationship with Corporate PPA: government alternative – equivalent mechanism

CIS: 'Cap-and-collar structure'

Figure 1: How the CIS works



Source: DCCEWW

Where: NSW, Federal

Model:

- Revenue floor to enable project to secure bank finance/debt – projects need to contract for higher returns for equity investors
- 'Option' contract which is exercised if wholesale price falls below agreed floor
- Revenue recovery mechanism if wholesale price is higher than agreed ceiling

Relationship with Corporate PPA: inter-linked – projects still need to contract PPAs

Corporate PPAs – Market Segments/Pathways

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1 Large Wholesale PPA negotiated with projects independent of the CIS

Rio Tinto

Rio Tinto has signed a series of PPAs to power aluminium facilities at Gladstone

- 25-year, 1.2 GW PPA with Bungaban wind farm (2024)
- 25-year, 1.1 GW PPA with Upper Calliope solar farm (2024)
- 90% of output from Smoky Creek & Guthries Gap Solar Farm, 600 MW and adjoining 2400 MWh battery (2025)

Corporate PPAs – Market Segments/Pathways

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2 Wholesale or Retail PPA negotiated with CIS bidder pre-financial close

'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'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' (Brad Hopkins, AEMO Services)

3 Retail PPAs with projects awarded LTESA/CIS contracts

- E.g. Coal Infrastructure Group, BOC with Zen Energy & New England Solar Farm, Amazon/Mokoan
- CIS (and NEM review) designed to reposition PPAs primarily as instrument post-financial close with shorter-terms (5-years)
- 19 solar and wind projects totaling 6.4 GW looking for offtakers
- Question: does the time projects are taking to reach financial closure reflect non-financial factors (e.g. transmission) – or have bids been priced too low and projects are experiencing difficulty contracting PPAs in a complex/uncertain market?

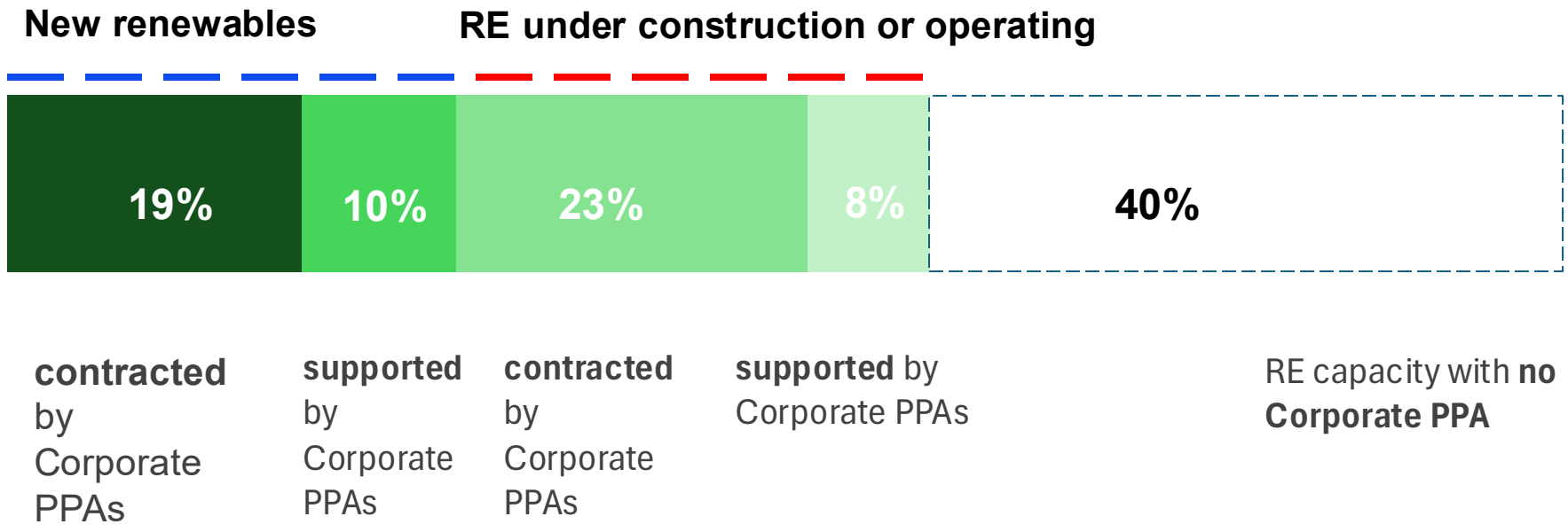
Implications for buyers

- **PPAs remain a core tool to meet sustainability goals and manage exposure to volatile market:** most organisations with 2030 targets will be in the market for a PPA
- **Hard market to contract in** – but inertia could come with a high price if either time-to-market coincides with price shocks and/or there is a surge in buyer demand towards 2030
- **Think longer-term and balance price considerations with certainty/lower risk** – what is a good or acceptable price? Explore different models for acceptable risk setting.
- **Buyers with 2030 targets in particular should start early** (risks of slower project delivery, project availability, competition etc)
- **Load match is becoming more important**: careful matching of load with PPA generation, use of storage and flexible demand, and emerging products important to avoid risks associated with market exposure

Corporate PPAs offer sustainability and energy security

Be aware of key market conditions and get started early to secure offtake required to meet renewables or emissions targets

Approximately 60 per cent of renewable energy capacity since 2017 has been contracted with or supported by a Corporate PPAs



Note: Corporate PPAs typically contract for only some of the capacity of a renewable energy project.

'**Contracted'** = the portion of RE capacity directly contracted with a Corporate PPA
'Supported' = the total size of the RE capacity of projects in which a Corporate PPA has been negotiated e.g. a 50MW PPA for a 100MW project counts as 50MW in the 'contracted' category and 100MW in the 'supported' category

Source: the renewable energy capacity that has reached 'financial close' since 2017 is sourced from the Clean Energy Council. The data on PPAs is from the BRC-A's agreement database. The database includes only publicly available information on PPAs and sometimes requires estimates on capacity based on available information – it should be considered approximate.

Business buyers' groups: Delivering investment in renewables

A National Group PPA Facilitation Program

Building on successful business buyers' groups projects delivered in Victoria and increasing business demand for group buying identified across NSW, Queensland and Victoria, we propose to deliver a National Group PPA Facilitation Program of six projects supporting Australian industrial businesses.

With less than 10% of NGERs Reporting companies having signed renewable PPAs to date, the Program will target these companies to deliver:

- Industry electricity decarbonisation: Up to 90 industrial businesses across NSW, Victoria and Queensland.
- Total renewables offtake: Up to 660 GWh per annum.
- Carbon emissions reductions: Up to 750,000 T CO-2 per annum.

Where there is sufficient demand from industry, the Program has the potential to deliver further projects during the 5-year period, boosting the sustainability and financial outcomes of the Program further.

Group 1	Group 2	Group 3
15 – 5 businesses	15 – 5 businesses	15 – 5 businesses
110 – 80 GWh/yr	110 – 80 GWh/yr	110 – 80 GWh/yr
125,000 – 45,000 T CO-2 /yr	125,000 – 45,000 T CO-2 /yr	125,000 – 45,000 T CO-2 /yr

Group 4	Group 5	Group 6
15 – 5 businesses	15 – 5 businesses	15 – 5 businesses
110 – 80 GWh/yr	110 – 80 GWh/yr	110 – 80 GWh/yr
125,000 – 45,000 T CO-2 /yr	125,000 – 45,000 T CO-2 /yr	125,000 – 45,000 T CO-2 /yr

Furthermore, for industrials investigating electrification of Scope 1 emitting processes, the Program will support the business case for this by reducing electricity costs; and will often prompt a review of energy management costs and approaches by a business. The Program could also provide a platform to integrate with emerging renewable heat projects by partnering with industry and other initiatives such as the Australian Alliance for Energy Productivity (A2EP).

The Program will leverage the proven buyers' group model, including facilitation experience, IP and delivery tools, in Victoria and BRC-A expertise to enable more industrial businesses to decarbonise by 2030.

Buyers' group case studies

Regional industrial PPA: Barwon Renewable Energy (BREP)

- Geelong Port, Barwon Water and Barwon Health buyers' group.
- 68 GW hr pa offtake from Acciona Australia Energia's 3MW Mount Gellibrand Windfarm, near Birregurra, Vic. 10-year PPA.
- Shared goal for 100% renewable electricity and producing net zero emissions via a power purchase agreement (PPA) with a local wind farm.
- Read more: https://geelongport.com.au/news/geelongport-using-100-renewable-energy-from-1-december/#:~:text=Through%20this%20partnership%20we%20have,be%20Australia's%20most%20sustainable%20port.

Industrial supply chain PPA: Lion Co Brewery & AHA

- Lion 'anchored' deal, which enabled Australian Hotels Association (AHA) members pubs and clubs to join later.
- 10-year Retail PPA with Engie/Simply Energy.
- First supply chain PPA in Australia.
- Decrease from 11.5c per kWh to 6.9c per kWh means AHA members are expected to increase savings by 40% per annum.
- 120 MW Silverleaf Solar Farm, NSW.
- Read more: https://www.lionco.com/2019/10/04/schooners-of-sunshine-worlds-first-industry-scale-aggregated-ppa/

Barwon Water

GeelongPort

Barwon Health

acciona energía

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