

RENEWABLE ENERGY FOR BUSINESS, SIMPLIFIED

ACCELERATING LARGE-SCALE RENEWABLE ENERGY
USE ACROSS AUSTRALIA

Monica Richter, Program Director, BRCA

Who we are...



Project partners



Funding partners





Appetite for Renewable PPAs | BRC-A Webinar | April 2020

Simon Corbell – Chief Adviser Energy Estate



Corporate PPAs - Australia

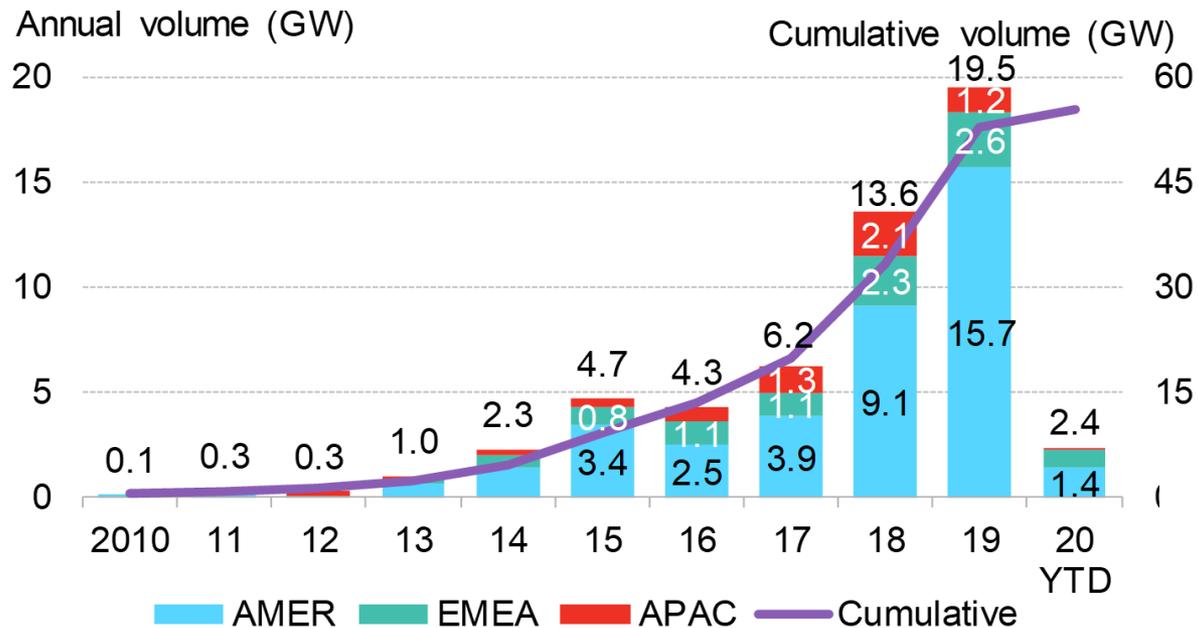
Closed in 2020:

- Amazon (146 MW Gunnedah Solar Farm)
- Transurban (Queensland Wind Farm)
- Shell (120MW Gangarri Solar Farm)
- City of Adelaide (Flow Power Virtual Generation Agreement)
- CleanCo (1000MW McIntyre Wind Farm)

Active in the Market:

- Amazon (run by Amazon)
- Newcrest (mining, run by Energetics)
- PACT Group (packaging, run by Schneider Electric)
- BHP (run by BHP)
- NSW Gov Whole of Government supply
- ACT Gov Reverse Auction (close to finalisation)

Global Corporate PPAs by Region



Source: BNEF

Impacts of COVID-19



Negatives

New

- Market uncertainty
- International travel restrictions
- Exchange rate volatility
- Supply chain impacts
- Bottle necks for decision makers (particularly gov)

Pre-existing

- Regulatory challenges
- MLF reforms

Impacts of COVID-19



Positives

- Need for economic stimulus at state and federal level – strong local content will add extra value
- Opportunity to create more resilient supply chains
- Investment in renewables delivers non correlated revenues
- Shovel ready projects with strong grid well placed
- Strong pipeline of projects available

Role for Government



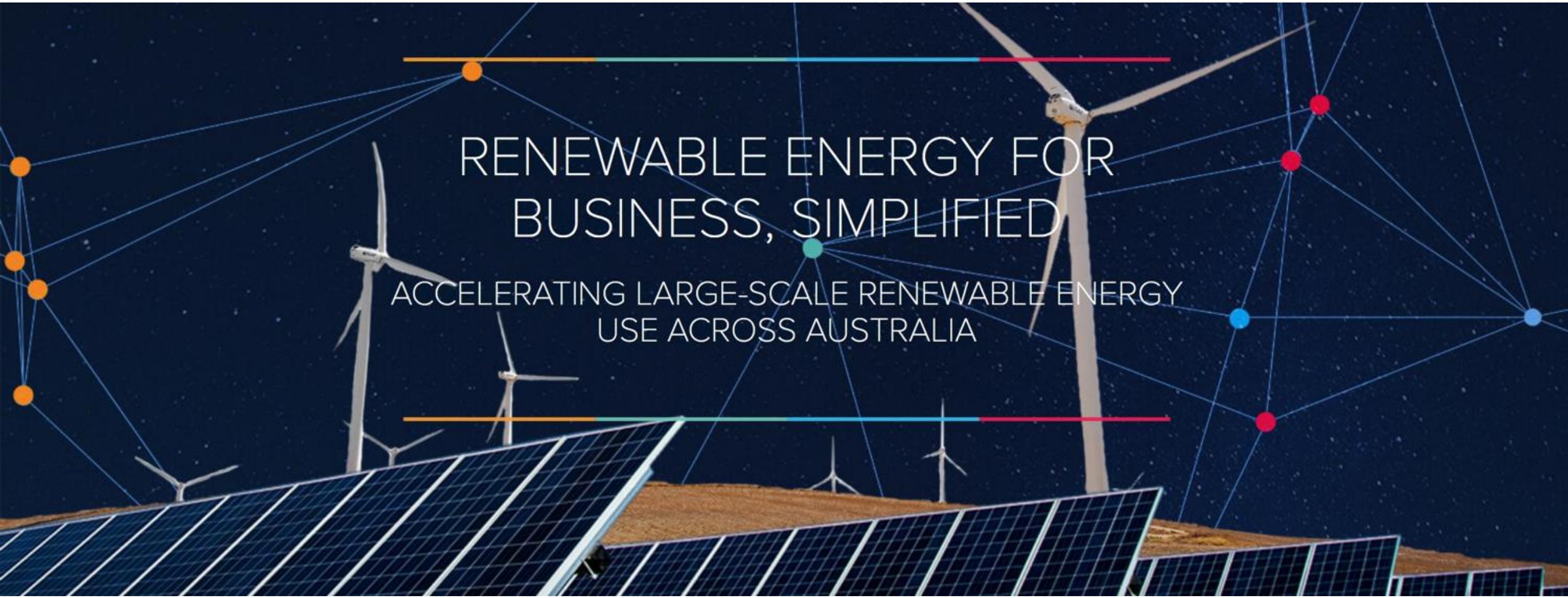
- Economic stimulus
- Support local content and build more resilient supply chains
- Focus on utility scale and C&I
- Support bid teams through tender process – white collar and blue collar jobs



255 Pitt Street
Sydney, NSW 2000

19-23 Moore Street
Canberra, ACT 2612

217-219 Flinders Street
Adelaide, SA 5000

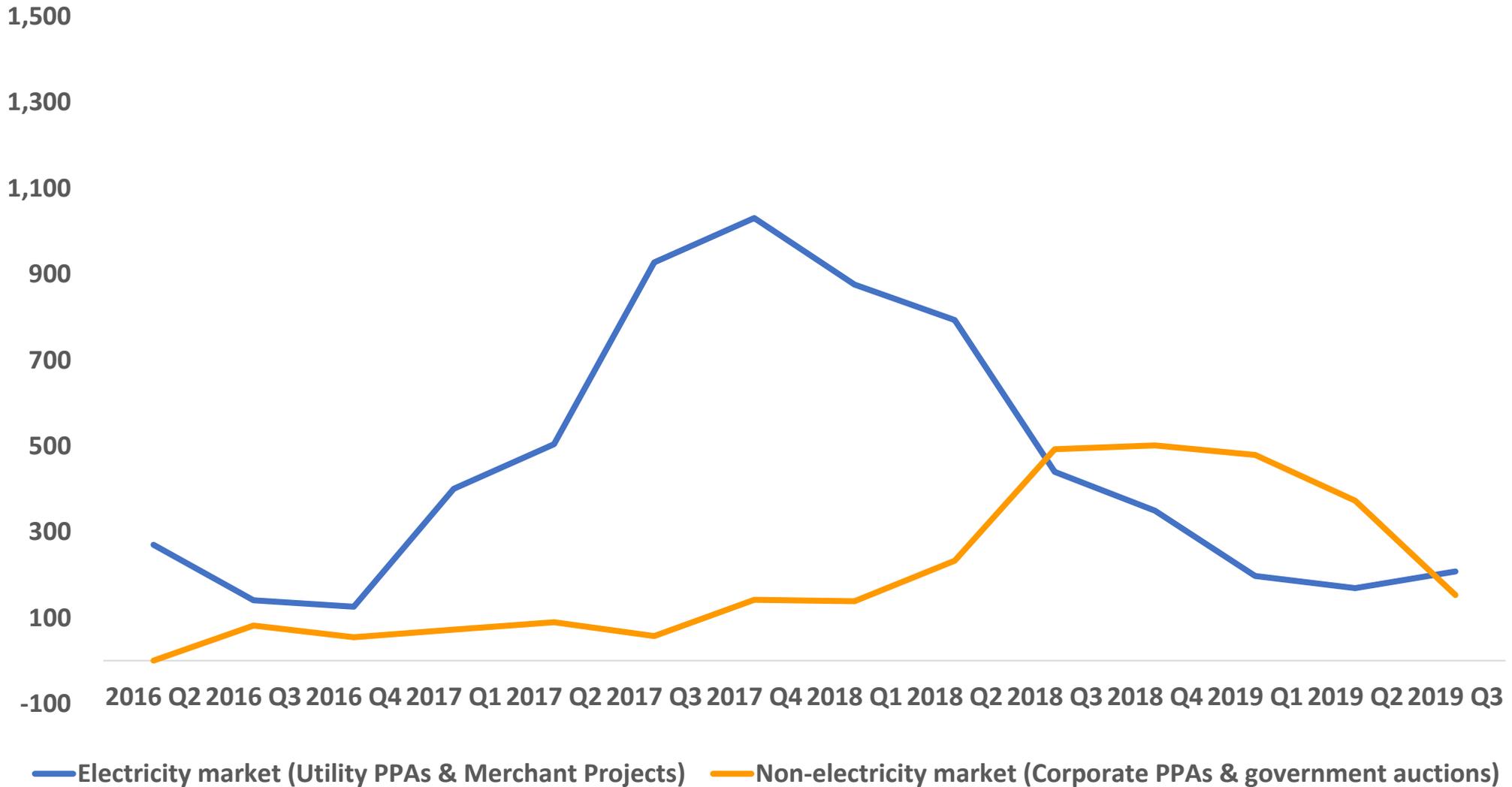


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Jonathan Prendergast, Technical Director, BRCA

Corporate PPAs and the energy transition



2020 Corporate PPA deals

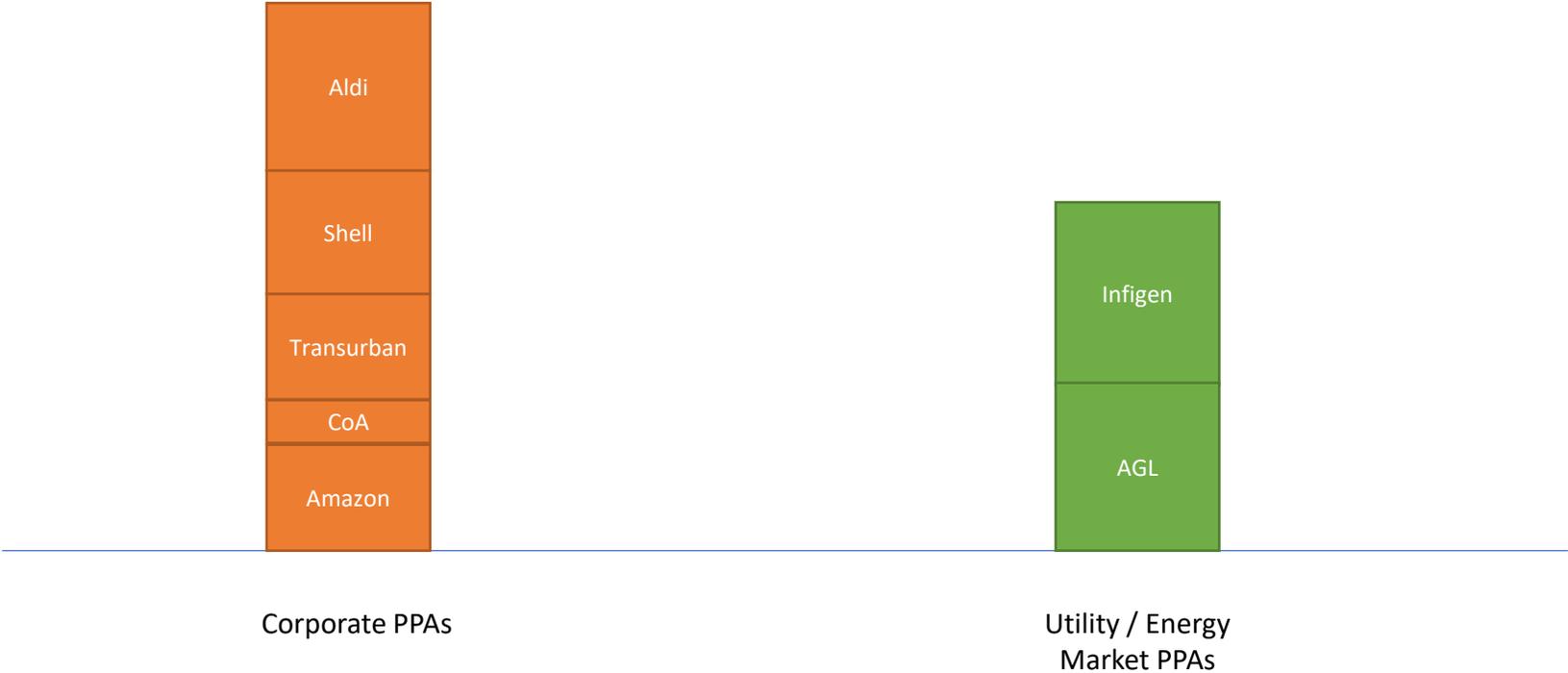


Buyer	Project	Developer/ Owner	Comment
Amazon	110 MW Gunnedah Solar Farm (NSW)	Canadian Solar	60 MW PPA
City of Adelaide	1 x Wind (existing) 2 x 3MW Solar	Pacific Hydro Tetris Energy	
Transurban	Undisclosed (QLD)	Undisclosed	PPA For 80% of annual demand
Shell	120 MW Solar Farm (QLD)	Self Developed/ Owned	
Aldi	227 MW Collector Wind Farm (NSW)	Ratch	40% PPA

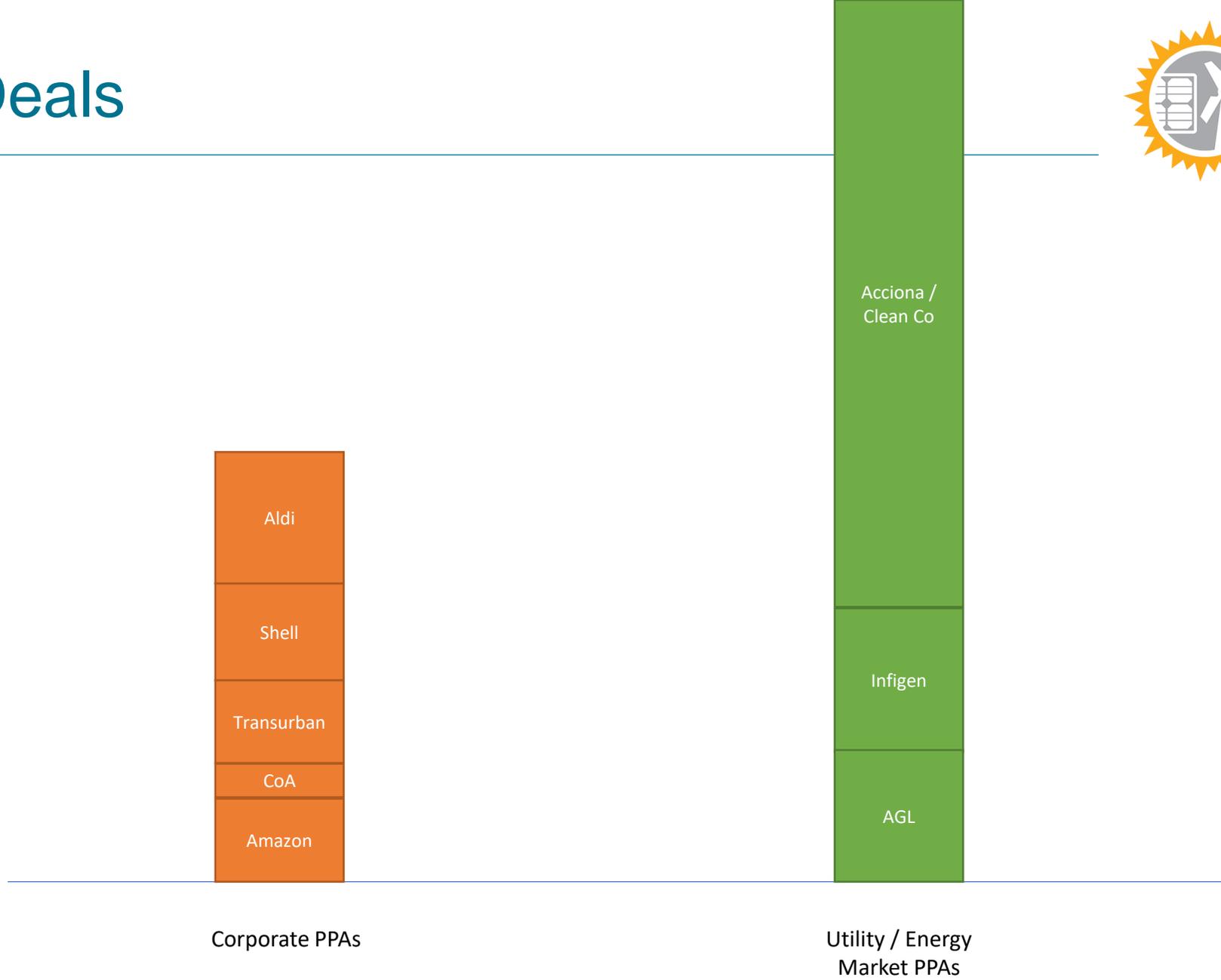
2020 Utility deals

Buyer	Project	Developer/ Owner	Comment
AGL	100 MW / 150 MWh Wandoan Battery (QLD)	Vena	
Infigen	227 MW Collector Wind (NSW)	Ratch	60% PPA
CleanCo	1,034 MW MacIntyre Wind Farm (QLD)	Acciona	100 MW Invest Develop 400 MW PPA
TBC	300 MW Rodds Bay Solar Farm (QLD)	Renew Estate	NTP Given

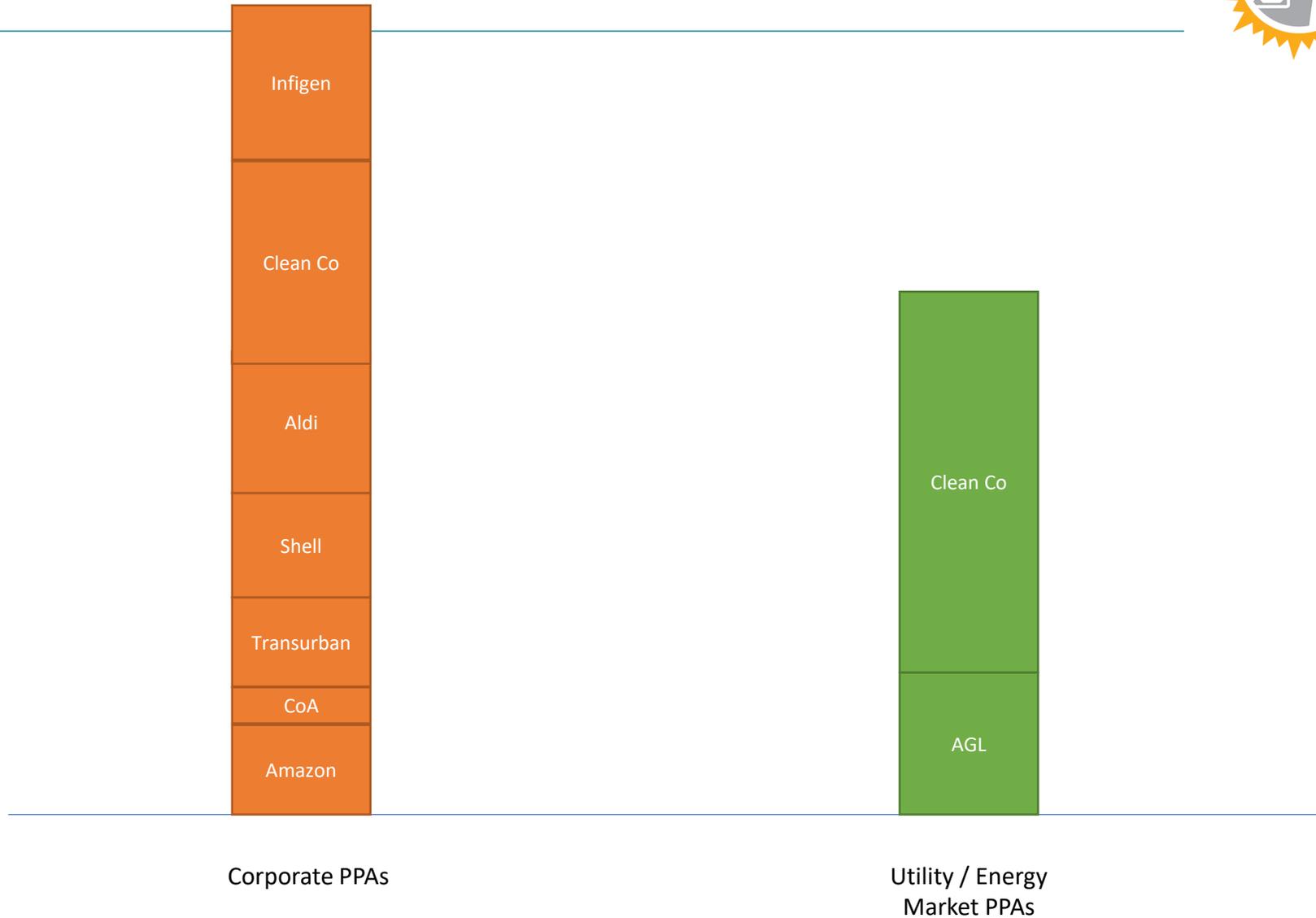
2020 Deals



2020 Deals



2020 Deals



PPA Processes during COVID-19

Process	What Can Continue	Challenges
Options Analysis & Business Case	Engaging consultants Analysis & Reports	Internal Stakeholder Engagement CFO Sign off for Procurement
RFP & Assessment	RFP Preparation & Issue Team Meetings & Assessment Due Diligence	Unable to meet bidders in person
Negotiations & PPA Execution	Bidder Presentations Term Sheet Negotiations Legal Drafting	Stakeholder sign off (eg. Accounting Treatment) CFO Sign off for Execution
Finance	Finance Partner Selection Contracts	
Construction	Procurement Onsite Works	Possible AEMO & TNSP / DNSP delays Unable to get international workers

For more information



Genevieve Mortimer

Program Director

genevieve@businessrenewables.org.au

Finnian Murphy

Project Officer

finnian@businessrenewables.org.au



PPAs in the COVID 19 bubble

BRC-A webinar

8 April 2020

energetics^o



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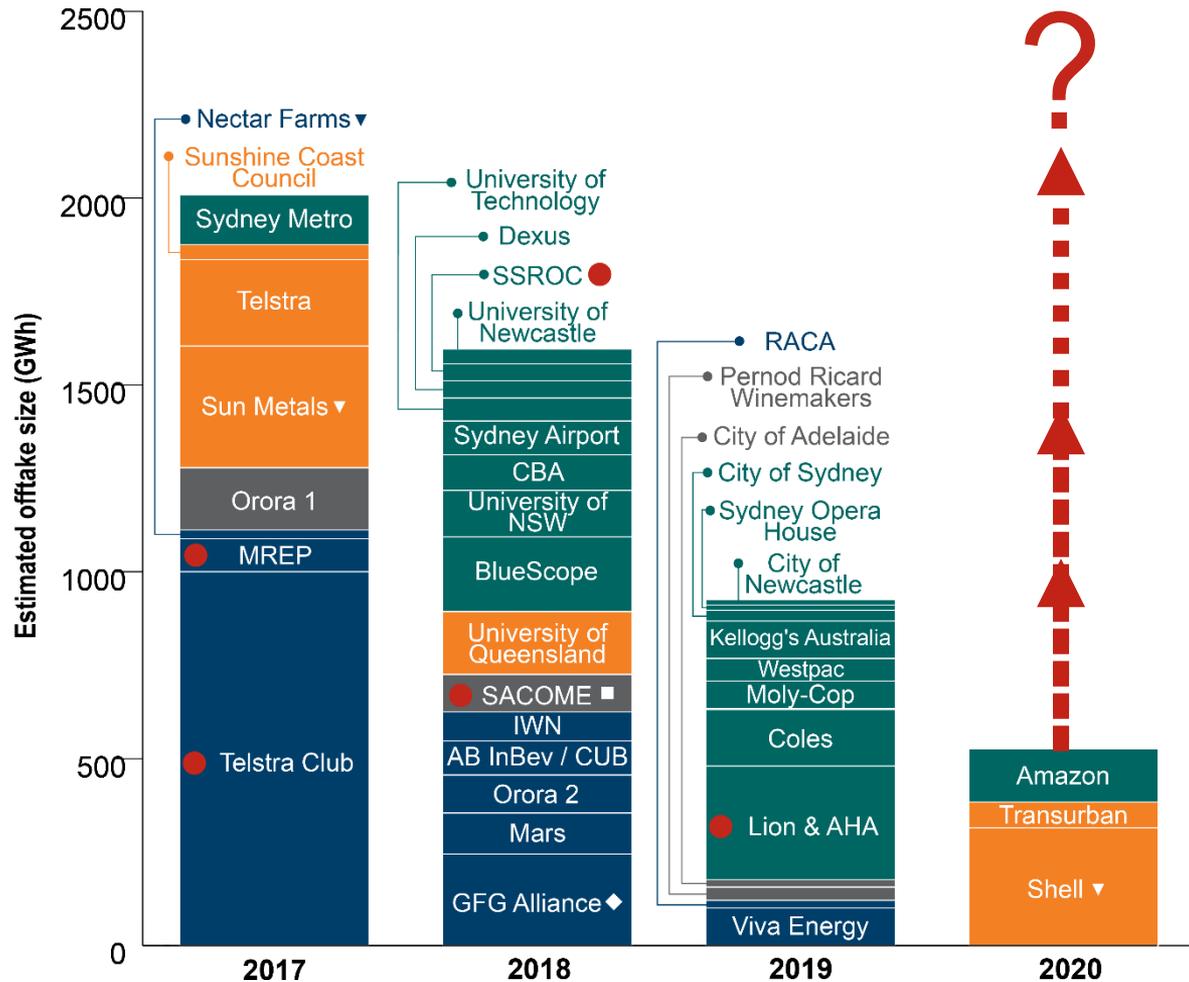
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bubble

“on the same level with each other”*

** Urban Dictionary*



<ul style="list-style-type: none"> ■ NSW ■ Qld ■ SA ■ Vic ● Buying group 	<ul style="list-style-type: none"> MREP - Melbourne Renewable Energy Project SSROC - Southern Sydney Regional Organisation of Councils SACOME - South Australian Chamber of Mines and Energy CUB - Carlton & United Breweries IWN - Intelligent Water Networks AHA - Australian Hotels Association CBA - Commonwealth Bank of Australia RACA - Royal Automobile Club of Australia 	<ul style="list-style-type: none"> ▼ Behind the meter utility scale solar Organisations include ■ Whyalla Steelworks ◆ Laverton Steelworks
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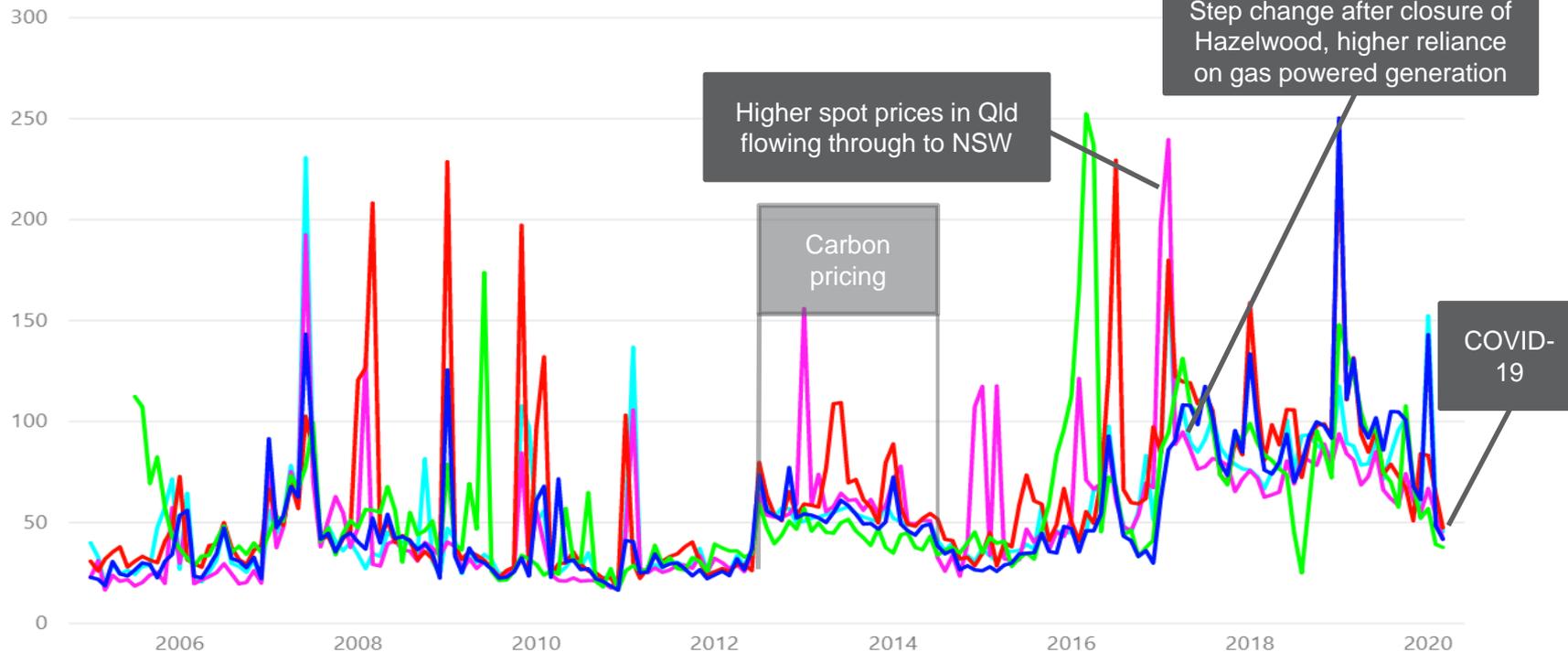
See <https://www.energetics.com.au/insights/knowledge-centres/corporate-renewable-ppa-deal-tracker> for further detail

Electricity spot markets remain sensitive to supply and demand side influences



Average monthly spot price 2005 – current (\$ nominal)

NEM Market Name ● NSW1 ● QLD1 ● SA1 ● TAS1 ● VIC1



Taking a longer term perspective...

①

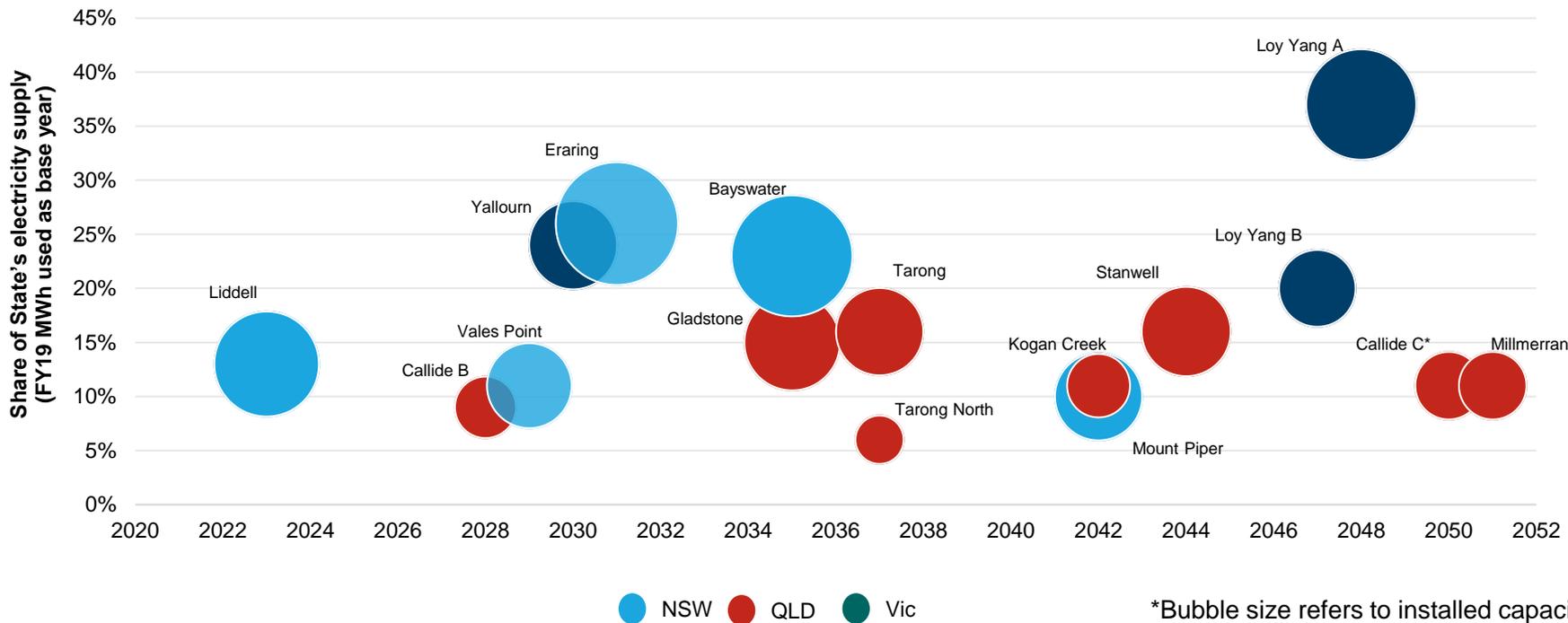
Climate Change and the associated risks remains at prevalent as before COVID-19





2 We are still just at the start of an unprecedented transformation of the electricity supply mix

Expected retirement of coal-fired power stations in the NEM

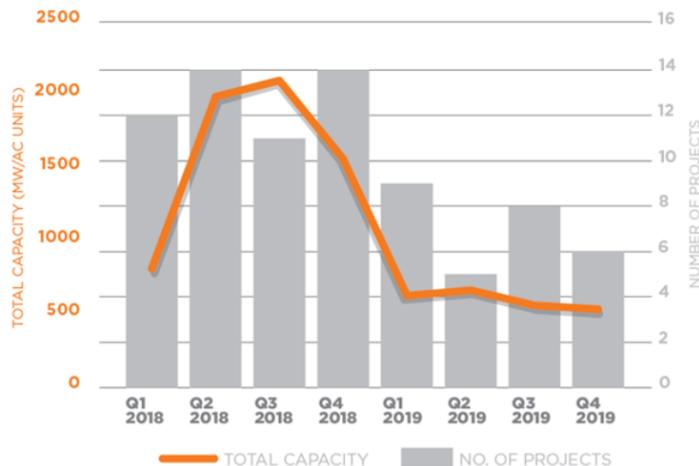


3

Renewable Energy Investors are facing strong headwinds



FINANCIALLY COMMITTED RENEWABLE ENERGY PROJECTS 2018-2019



“Downer EDI will no longer bid fixed prices to **build solar**, coal or iron ore projects because they are too risky, says chief executive Grant Fenn... its decision on solar is sure to have ramifications, and the risks it highlights **point to rising costs** – already being felt by the higher price of power purchase agreements being discussed in the industry.”

~ *Renew Economy* Feb 12 2020

“UK-based infrastructure heavyweight **John Laing** has confirmed plans to offload its Australian solar and wind energy assets and **quit the market** entirely, after a year of **project delays and transmission losses** put further investment in the sector firmly in the too-hard basket.

~ *Renew Economy* March 4 2020

“**The plunge in the Australian dollar due to the COVID-19 outbreak** is likely to wreck the economics of some planned solar and wind power projects, **causing delays or cancellations** and sharply slowing the roll-out of new renewable generating capacity over the next two years... **potential capital cost increases of up to 36 per cent** as their rapidly depreciating currencies affect the cost of components in the supply chain.”

~ *AFR* 26th March 2020



Key take away at a time of increased uncertainty?

If you are able to retain a long term perspective, a well-designed corporate PPA remains a valuable risk management strategy to deliver greater budget certainty and mitigate against the risk of higher prices in the medium to long term

Contact us

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www.energetics.com.au

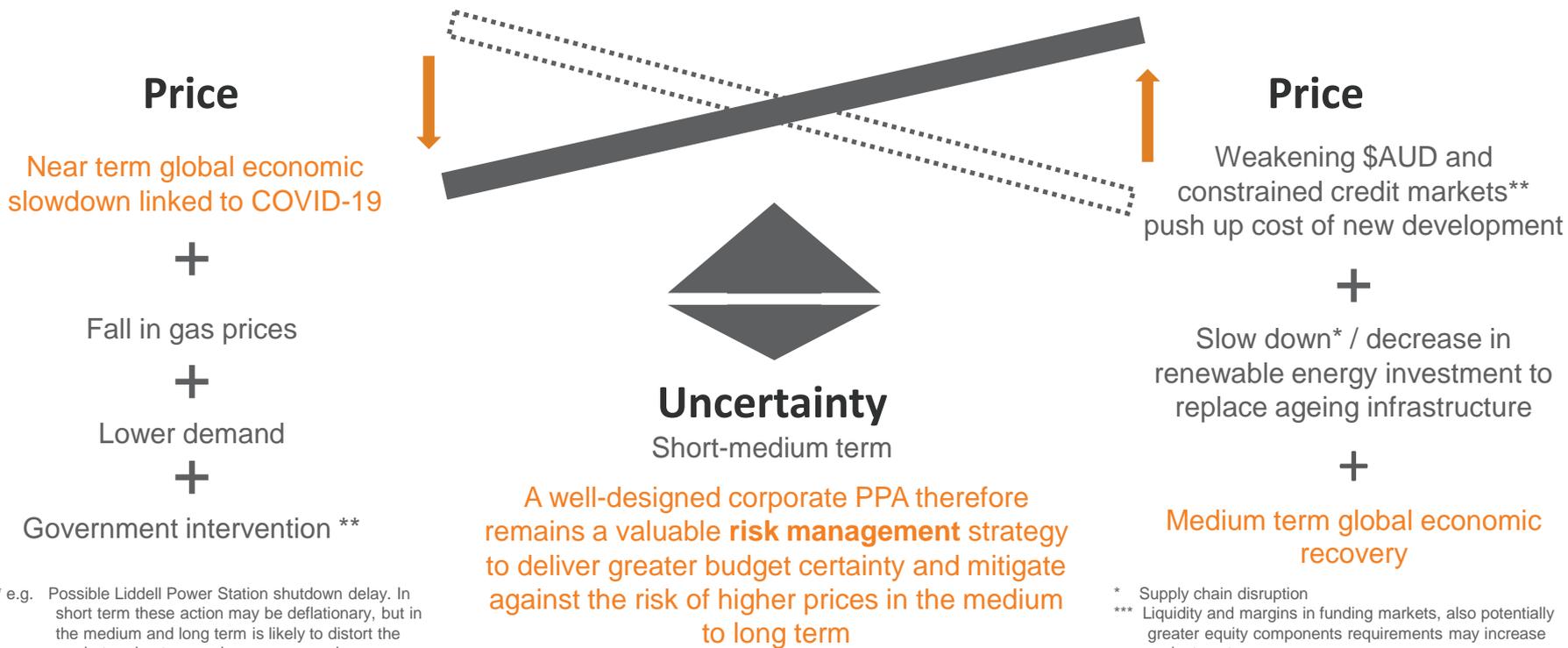


[@energetics_au](https://twitter.com/energetics_au)



www.linkedin.com/company/energetics-pty-ltd

Nonetheless, risks are playing out in the market from the perspective of the generator and buyer



** e.g. Possible Liddell Power Station shutdown delay. In short term these action may be deflationary, but in the medium and long term is likely to distort the market and put upward pressure on prices.

* Supply chain disruption
*** Liquidity and margins in funding markets, also potentially greater equity components requirements may increase project costs.



Who we are

Energetics works with Australia's governments and ASX200 businesses on strategies to address climate change and achieve significant improvements in energy management.

Appetite for Renewable PPAs

BRC-A Webinar, 8th April 2020

**we
power**



WePower is a **Renewable Energy Transaction Marketplace** that uses **standardised contracts and processes** to simplify, streamline and de-risk renewable energy transactions for Buyers and Generators.

for BUYERS

- tangible environmental impacts
- lower energy costs
- long-term cost certainty

for PROJECTS

- new energy buyer segments
- faster financial close
- lower transaction costs

for RETAILERS

- improved alignment between generation & retail portfolios
- new products & services
- end-to-end transparency

Value for Business

WePower enables businesses to achieve **tangible environmental outcomes** whilst securing **lower cost renewable electricity** directly from projects.

achieve tangible environmental outcomes

- move beyond offsetting
- support real projects
- RE100-aligned

secure lower cost renewable energy

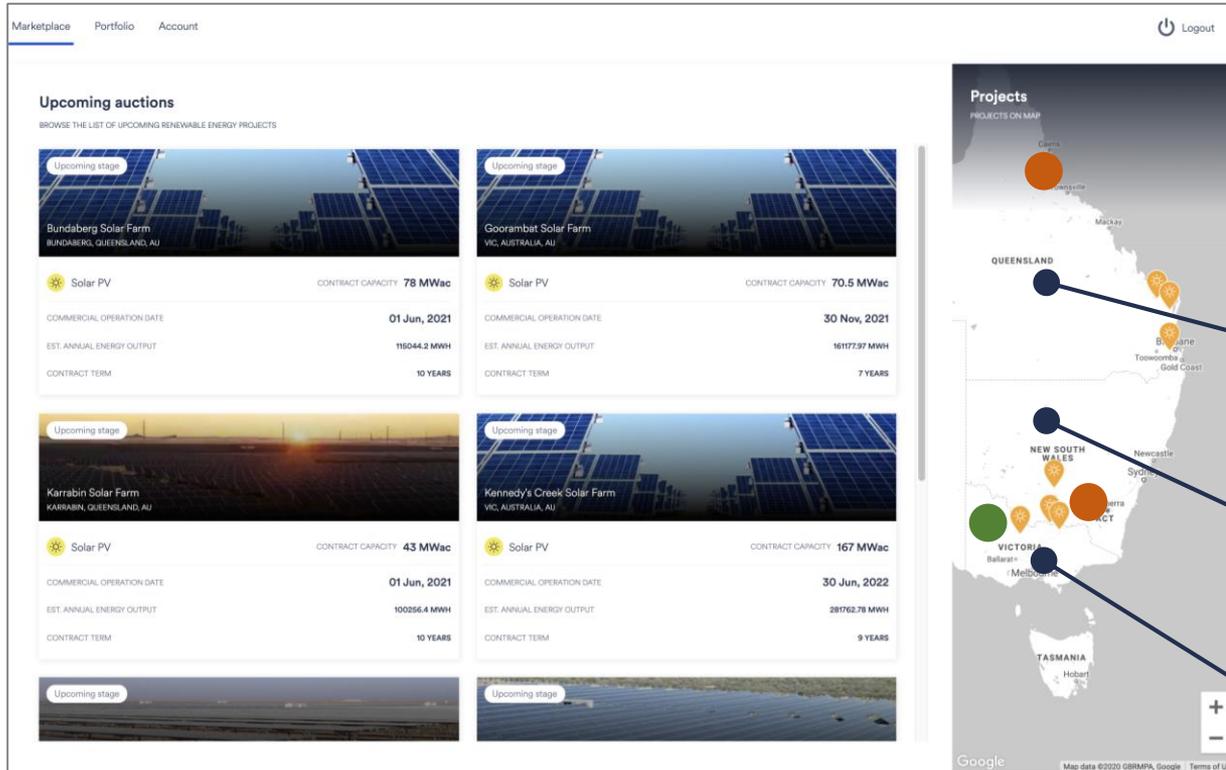
- secure long term cost certainty
- meet your procurement & environmental objectives

contracts meets your business needs

- **Virtual PPAs** can save up to 40%
- **Retail PPAs** can satisfy environmental & procurement criteria

Projects on the Platform

WePower has a **growing pipeline of renewable energy projects**, which can be **contracted to Buyers as wholesale or retail products**.



-  Successful Transactions
-  On-going Transactions
-  Upcoming Transactions

493 MW

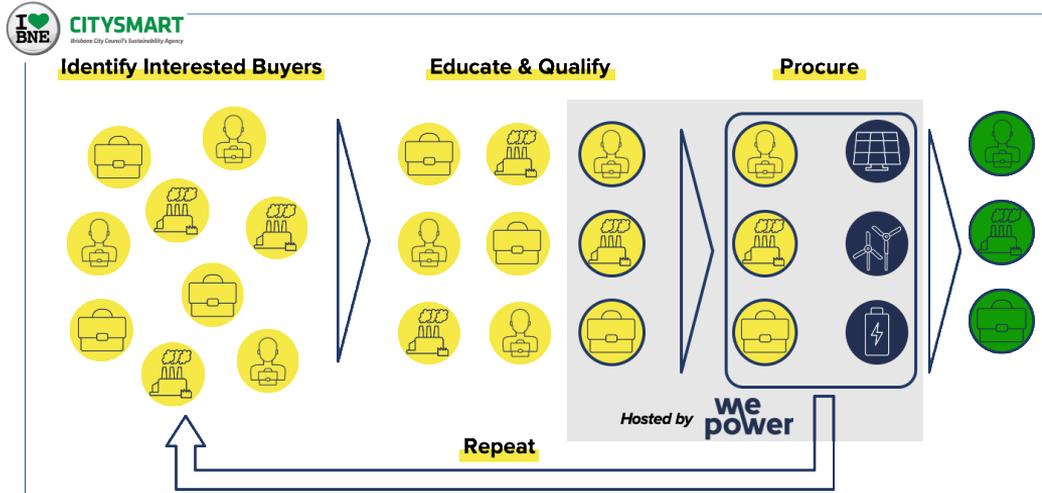
110 MW

164 MW

WePower can create **bespoke procurement facilities** for government agencies, peak bodies and industry groups to enable their organisations to secure electricity from local renewable energy projects.

Brisbane's Renewable Energy Procurement Facility

Enables Queensland's businesses to achieve tangible environmental outcomes whilst reducing their energy costs.



Businesses can...

- engage with the Facility manager
- organise themselves into ad hoc buyer groups
- find & contract with projects that meet their criteria
- get on with their business

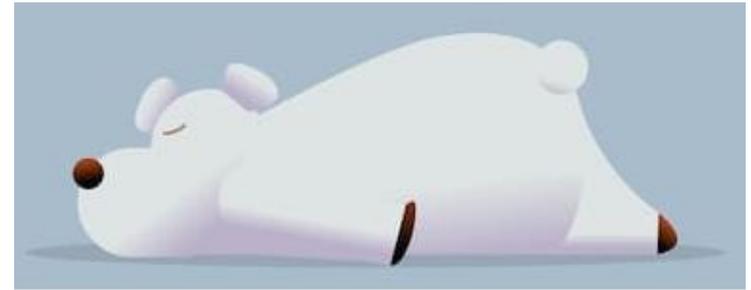


2020 started badly... and became progressively worse.

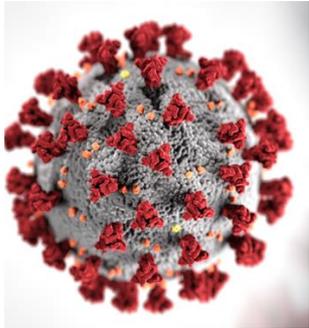


- VIC operational projects curtailed by 50%
- development stage projects in VIC & southern NSW delayed indefinitely
- uncertainty across the NEM states

- **Immediate impact:** death, crisis, uncertainty, AUD/USD ↓ 10%, ...
- **Real Economy impact:** businesses close en masse, reduction in demand from SME & C&I, fall in short term wholesale electricity pricing, supply chains disrupted, ...



- **Impact on PPA Buyers:** Corporate Buyers are delaying their procurement processes; Retail Buyers are reviewing their books (or going under); ...
- **Impact on Project Owners:** Those who have secured their funding & equipment are ploughing along; those who have not are struggling.



Thank you ...

Jenya Khvatsky

Director, Business Development

jenya@wepower.network

+61 431 180 790



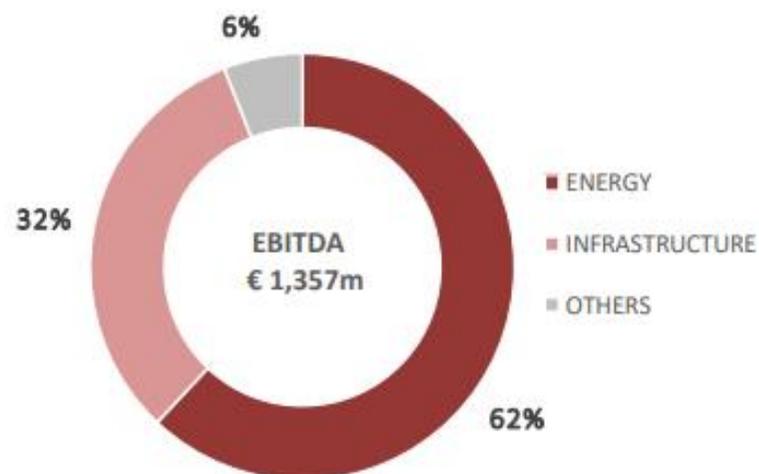
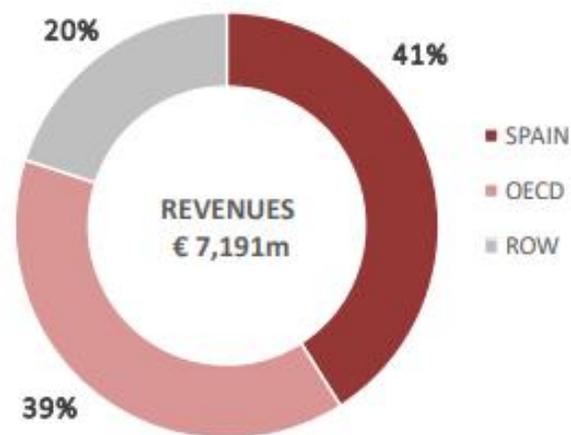


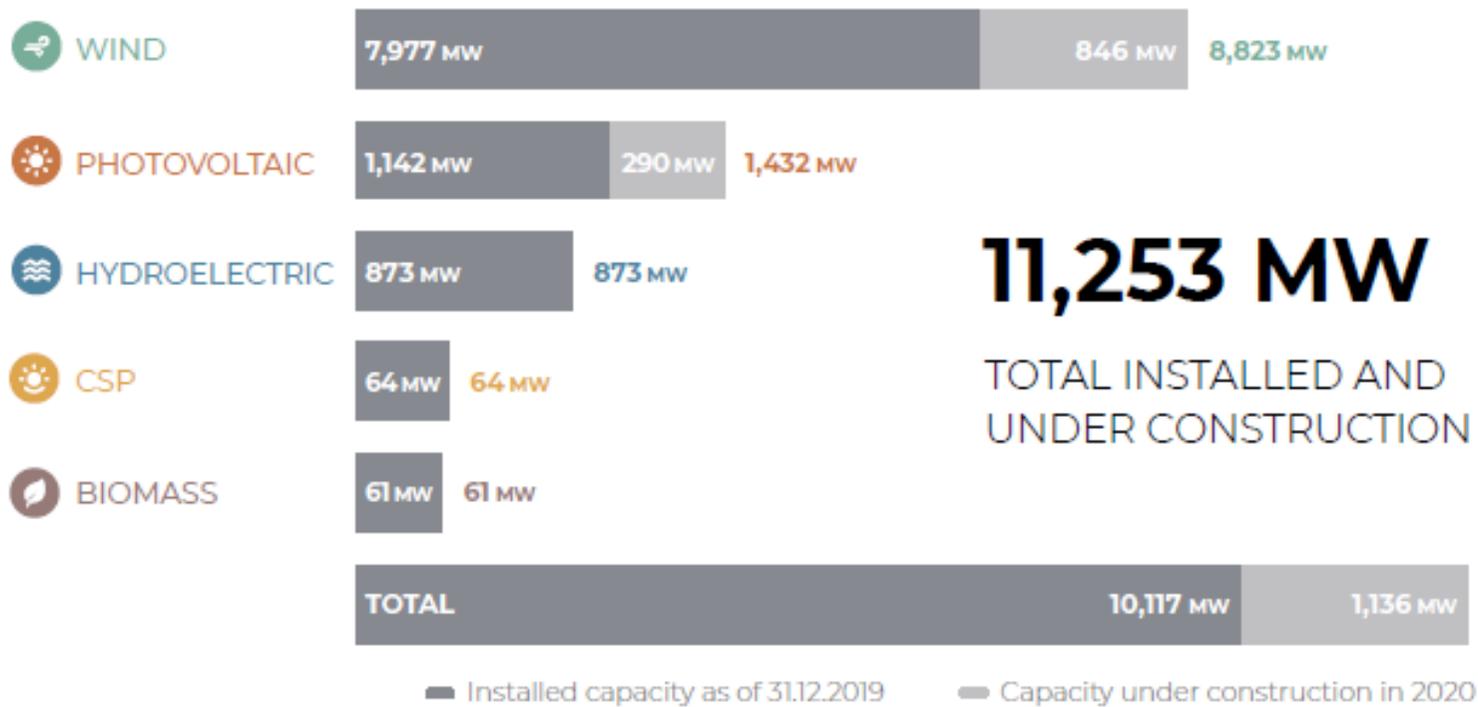
WHO WE ARE



WORLD LEADER IN SUSTAINABLE INFRASTRUCTURE SOLUTIONS AND RENEWABLE ENERGY PROJECTS

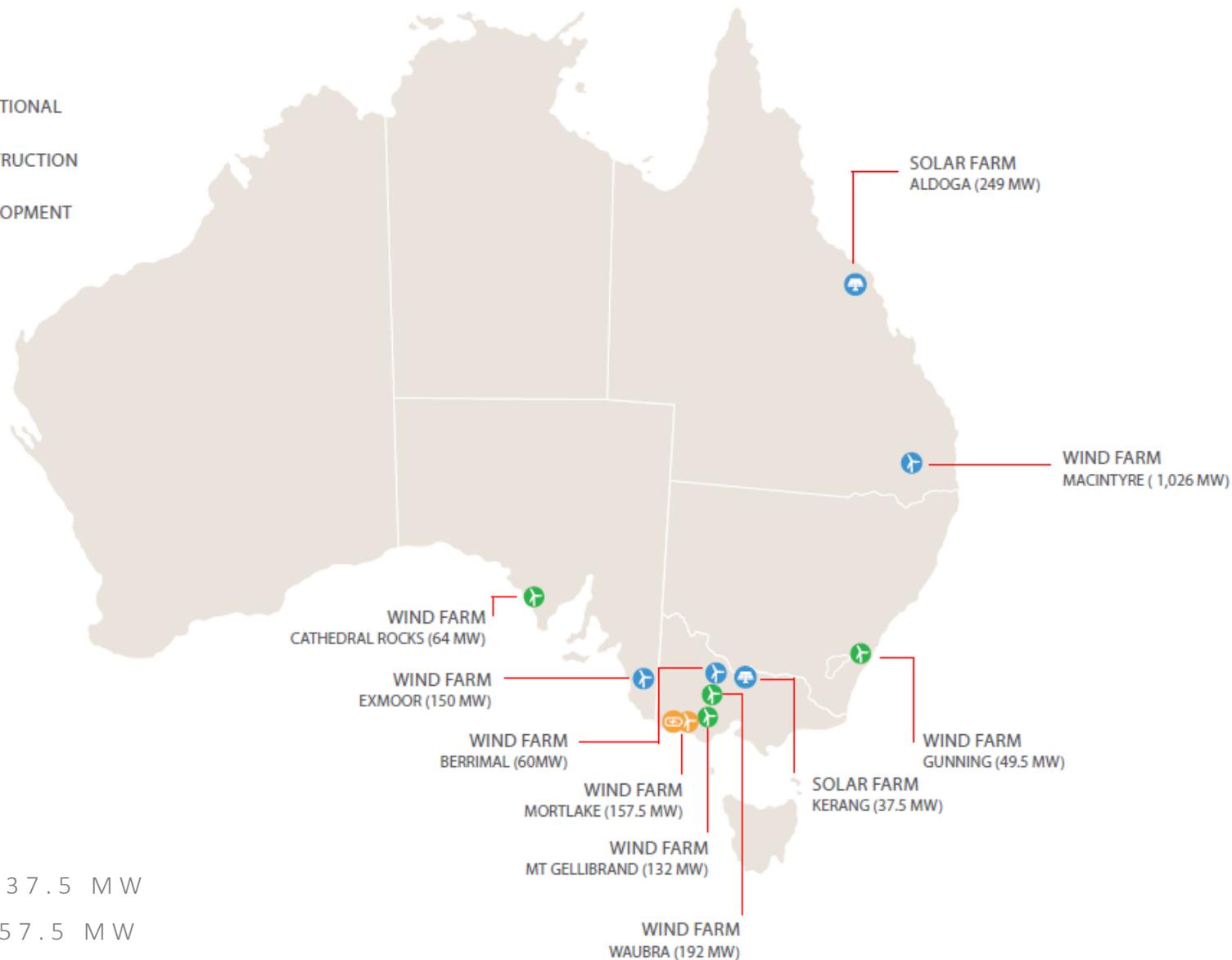
- * In Energy, ACCIONA is one of the **world's largest owners & operators of renewable generation**
- * The Company is delivering some of the **most specialised and high-profile infrastructure projects** in the world
- * **Market capitalization ≈ €5.2bn (EV ≈ €11bn)**
- * Constituent of **IBEX-35**, Spain's benchmark stock index
- * **Family-owned** business ≈ 60% Entrecanales family
- * **Global presence** >55% of its revenues from International markets
- * **Carbon neutral** since 2016 and a key player in the **Low Carbon Transition**





WE HAVE 2000+MW OF RENEWABLE ENERGY PROJECTS CURRENTLY UNDER DEVELOPMENT ACROSS AUSTRALIA, COVERING FOUR STATES

	OPERATIONAL
	CONSTRUCTION
	DEVELOPMENT



Operational	437.5 MW
Construction	157.5 MW
Development	2000+ MW

WE OFFER END-TO-END SOLUTIONS, WITH EXPERIENCE ACROSS THE ENTIRE VALUE CHAIN



Unique capabilities: transversal knowledge, proven reliability, made-to-measure solutions

Nordex and ACCIONA Windpower (AWP)

In 2016, ACCIONA S.A. sold its wind turbine manufacturing subsidiary, AWP, to Nordex, Germany in return for cash and a **29.9%** stake in the business. The merger created a globally-positioned European powerhouse in the wind industry with manufacturing facilities in Europe, North America, South America and Asia. This relationship harnesses the complementary markets and technologies of each company, solidifying our position as a major wind energy player with expertise at all stages of the value chain.

In October 2019, ACCIONA increased its shareholding in Nordex to **36.27%**, reconfirming our commitment to the long-term success of this venture and our confidence in the commercial viability of the partnership.



WE ARE A TRUSTED PARTNER TO CUSTOMERS FROM A DIVERSE RANGE OF SECTORS, INCLUDING INDUSTRY LEADERS WITH GLOBAL REACH



Current and previous customers.

GREENCHAIN: 100% ENERGY OF RENEWABLE ORIGIN BACKED BY BLOCKCHAIN

- Real time visualization of 100% renewable origin of the electricity supplied with complete reliability and security.
- Shows the exact moment at which each kWh is generated and the plant that has produced it,
- Greenchain provides additional information on the advantages that the renewable consumption represents from the point of view of sustainability, in terms of:
 - CO2 emissions avoided by the client's consumption and the plant supplying the energy.
 - Significant equivalences (trees planted, fossil-fuel vehicles withdrawn from service).
- Greenchain also provides information on community projects associated with the offtake-project that are linked to Sustainable Development Goals (SDG),



Traceability



Generation



Sustainability



Corporate Social Responsibility

- 1026 MW MacIntyre wind precinct
- ~3TWh per annum
- Complementary profile to QLD solar
- Nordex wind turbines (162 N163 5.7MW turbines)
- Hub height 148m, steel tower, 163m rotor diameter
- 64km transmission line Tummaville switching station (near Milmerran)
- Construction commencement 2021
- Commercial Operation 2024
- 400MW offtake with CleanCo as part of the R400 process



Power Purchasing Agreements

Transurban motivation and considerations | April 2020



Delivering our committed PPAs and looking to other markets

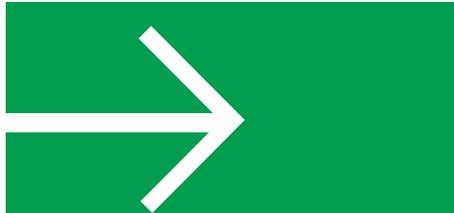
- Recently committed PPAs in Queensland and NSW will see 80% renewable energy used across our Brisbane and Sydney markets
- These PPAs will bring Transurban's total renewable energy volume to 50%

Motivation

- Progress towards our greenhouse gas reduction target (52% by 2030)
- Stakeholder expectations and brand value
- Greater control of electricity costs
- Reduce carbon price exposure

Considerations and risk

- A PPA requires scale and tenure to be viable
- Demand profile and suitability of renewable generation
- Internal counterparties to the agreement
- Approach to retail electricity contracting
- PPA creates cyclical operational budget variability driven by the difference in agreed PPA strike price and future spot market prices
- Reduce exposure to overall market price volatility



Next Steps

- Maintain contact with developers to ensure PPA delivery remains on track
- Explore opportunities in our other markets (Vic and North America)