



HERBERT
SMITH
FREEHILLS

CORPORATE PPAs IN AUSTRALIA

MARKET UPDATE

ASIA CORPORATE ENERGY DAY, SINGAPORE

30 JUNE 2017

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INTRODUCTION

- Gerard Pike: Partner, Herbert Smith Freehills
- The HSF renewables team

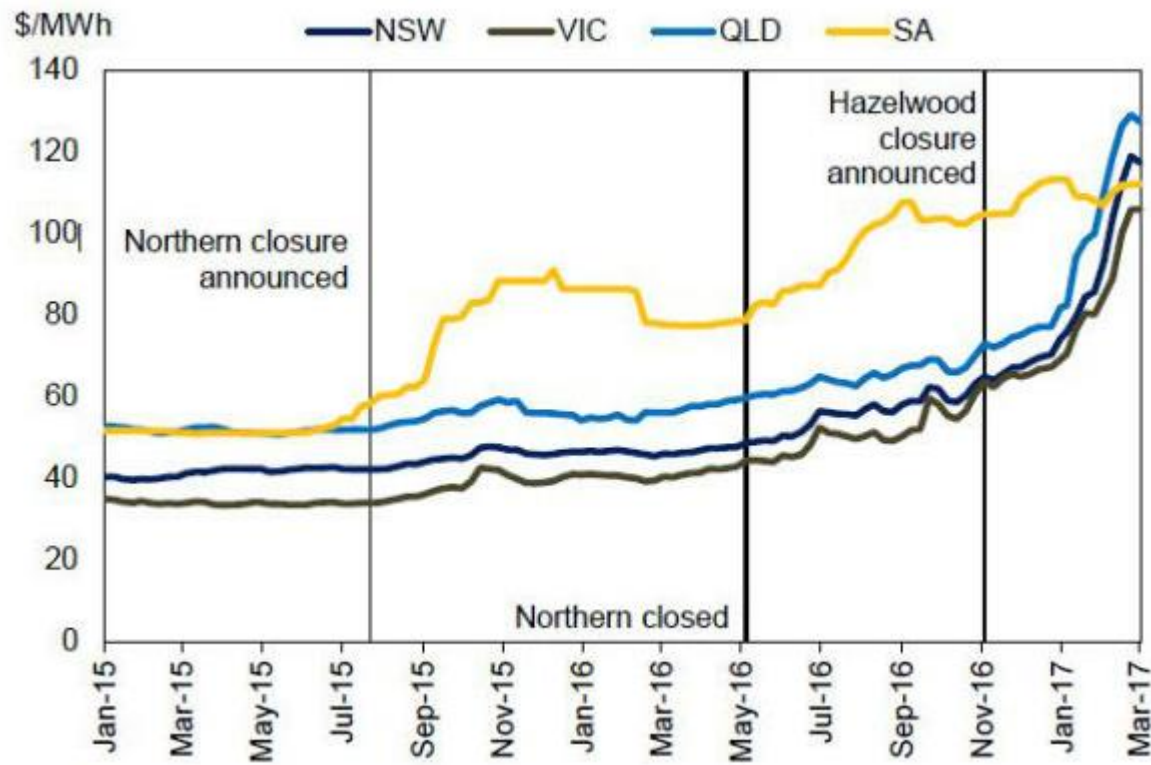
CURRENT AUSTRALIAN ELECTRICITY MARKET

- Electricity demand decreasing with the slow-down in Australian manufacturing, efficiency measures and increase in self-generation, but is now back on a modest growth path. Volatility increasing
- Changing generation mix: closure of existing coal-fired plant, mothballing and closure of gas-fired plant (high gas prices) and increasing levels of renewables. New technologies emerging
- Certainty regarding Australia's renewable energy target (**RET**) finally provided in 2015. Has resulted in a boom in renewables projects, but a closing window for investment.
- Projects to achieve Australia's RET (23.5% of Australian generation from renewable sources by 2020) are expected to have reached close by the end of 2017
- Australia has great renewable energy resources: there is still a massive pipeline of world class large-scale wind and solar sites under development in Australia

AUSTRALIA HAS INCREASING ELECTRICITY PRICES

- Wholesale electricity prices in Australia have increased by 30-40% in the last 12 months
- The State of South Australia is now said to have the highest retail electricity costs in the World
- Corporate and industrial customers are facing massive increases in electricity costs

AUSTRALIA HAS INCREASING ELECTRICITY PRICES



Source: <http://www.abc.net.au/news/2017-03-19/wholesale-prices-march-2017/8366372>

DRIVERS FOR CORPORATE PPA/OFFTAKERS

Why are corporates in Australia seeking PPAs from renewable generators?

- to fix/hedge their rapidly rising electricity consumption costs
- for 'green' marketing purposes
- to achieve internal corporate carbon reduction targets
- because renewable corporate PPAs have been successful in other jurisdictions in which companies operate (eg USA)
- for research and corporate development

DRIVERS FOR RENEWABLE GENERATORS

Why are wind developers/wind farm owners keen on corporate PPAs?

- project financing generally still requires some level of certainty for project cashflows, so a contracted revenue stream is often necessary
- many equity investors (especially managed funds) require contracted revenue certainty for wind energy project investments
- incumbent electricity retailers have almost reached their medium term limit of contracted renewable energy supply and so are not offering many new PPAs at attractive prices for developers
- some State Government feed in tariffs/PPAs have been offered and new rounds are coming but these are not enough to satisfy the current wind development pipeline
- a corporate offtaker with a strong credit rating can enhance a wind project's creditworthiness and 'bankability'

THE CURRENT PPA MARKET

What are we seeing:

- ‘first tier’ (investment grade) electricity retailers (AGL, EA and Origin) have almost fully contracted LGC’s until 2030 with recent or current programmes
- second tier retailers and some State Government owned utilities are in the market for LGC only and bundled PPAs
- the first ‘corporate’ renewable PPAs have been announced and awarded and several other tenders are currently in the market (the focus of this presentation)

WHAT ARE WE SEEING – PPA PRICING

Bundled pricing for wind farm PPAs is dropping in Australia:

- **August 2016:** Hornsdale 3 Wind Farm 109MW capacity greenfields development: (South Australia: ACT Government (offtaker)/Neoen sponsor) **\$73/MWh for 20 year contract** (bundled power and green certificates)
- **November 2016:** Silvertown Wind Farm 200MW capacity greenfields development New South Wales: AGL (offtaker)/Powering Australia Renewables Fund (Sponsor) **\$65/MWh for 5 year contract** (bundled power and green certificates)
- **May 2017:** Stockyard Hill Wind Farm 547 MW development (Victoria: Origin offtaker/Goldwind sponsor): PPA price (wind farm) reported at below **\$55/MWh for 10 year contract** (bundled power and green certificates)

WHAT WE ARE SEEING - CORPORATE PPA'S

Renewable corporate PPAs in 2017 so far:

- **Kleenheat** (Wesfarmers sub) rated S&P A- signed a 10 year bundled PPA for the 30MW Byford Solar Project near Perth Western Australia
- **Telstra** rated S&P A signed an 8 year bundled PPA for the 70MW Emerald Solar Project in Queensland (owned by RES)
- **ABInBev/Carlton United Breweries** rated Moody's A3 has issued an RfP for PPAs until 2030 or 2035 for 80GWh p.a. for renewable generators (solar or wind)
- **Coles** (Wesfarmers sub rated S&P A-) has an RfP with shortlisted bidders for up to 250GWh p.a. for 7-13 year PPAs for renewable generators (solar or wind)

WHAT WE ARE SEEING – UNIVERSITY PPAs

Australian universities are tendering for renewable ‘corporate’ PPAs

- **Monash University** S&P AA+ has issued an RfP for a 10 year PPA for 55GWh p.a. for new renewables projects (wind or solar)
- **University of New South Wales** S&P AA+ has issued an RfP for a 10 year PPA for up to for 93GWh p.a. for new renewables projects (solar only)
- **University of Technology Sydney** Moody’s Aa1 has issued an RfP for a 10-15 year PPA for up to 27GWh p.a. for new renewable projects (wind or solar)
- other universities will follow...

CORPORATE PPA STRUCTURES

- Two potential revenue streams for renewables projects: electricity (**Black**) and Large-scale Generation Certificates (**Green**)
- Black is generally sold to AEMO via the National Electricity Market (**NEM**). Green can be transacted bilaterally
- Offtake agreements/PPAs can take the form of a hedge (contract for difference) for the Black only or a 'bundled' supply arrangement along with the physical delivery of Green
- There have been some 'direct physical supply' corporate PPAs with mining companies in Australia but these have been solar and not wind projects (so far)

WHERE IS THE CORPORATE PPA MARKET HEADING?

- We expect a rapid growth in the number of corporate renewable PPAs in the Australian market
- This is because:
 - wholesale power prices in the market are soaring
 - renewable (and especially wind power) is now cheaper than new thermal generation
 - companies have progressive carbon reduction policies and targets
 - companies such as Telstra have now shown that corporate PPAs are possible and cheap

CONCLUSION

- Audience observations
- Questions?

PROFILE



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Relevant Experience

Gerard practices in the areas of project finance, infrastructure and energy acquisition financing, power projects (including power purchase agreements), syndicated lending, loans trading and loan derivatives and is named in 'Best Lawyers in Australia 2017' for Banking and Finance Law and Project Finance and Development Practice.

He is a market leading lawyer in Australia for renewable energy projects. Gerard's clients include Pacific Hydro, GE, Engie, Acciona Energy, Goldwind, AGL and all of the banks active in lending in the Australian renewables market.

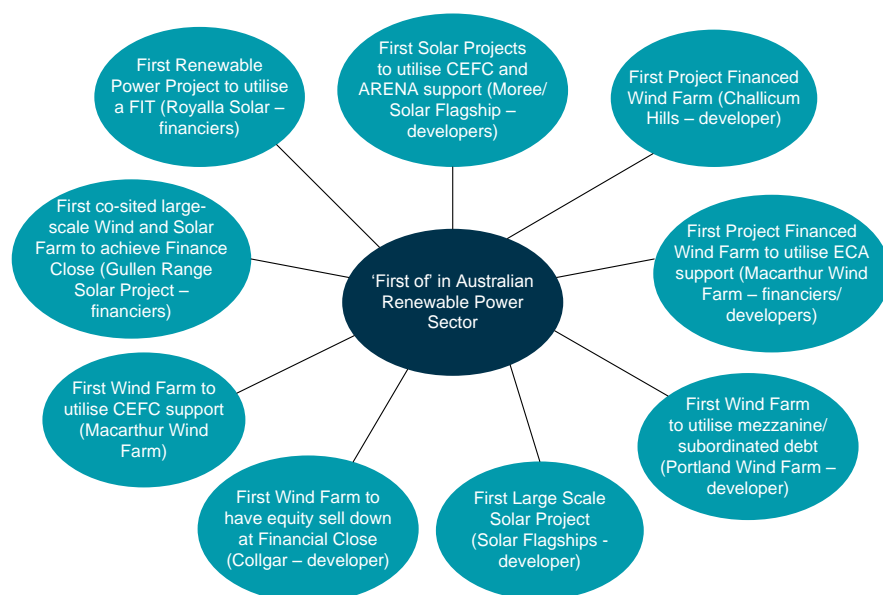
A selection of Gerard's recent wind power project experience includes:

- **Mt Gellibrand Wind Farm:** advising Acciona (owner sponsor)
- **White Rock Wind Farm:** adviser to Goldwind (owner sponsor)
- **Coopers Gap Wind Farm:** adviser to financiers
- **Stockyard Hill Wind Farm:** adviser to financiers
- **Mt Emerald Wind Farm:** adviser to financiers;
- **Kiata Wind Farm:** adviser to financiers;
- **Boco Rock Wind Farm:** adviser to GE/CWP sponsor/developer
- **Bodangora Wind Farm:** adviser to Infigen (owner/sponsor).
- **Gullen Range wind farm:** adviser to the financiers
- **Waterloo wind farm:** adviser to financiers on the project financing of the Waterloo Wind Farm in South Australia.
- **Taralga Wind Farm:** adviser to Santander (owner)
- **Collgar Wind Farm:** adviser to REST/UBS (owners)
- **Cathedral Rocks Wind Farm:** adviser to financiers
- **Wattle Point Wind Farm:** adviser to Infrastructure Capital Group (owner)
- **Hallett 2 Wind Farm:** adviser to owner
- **Gunning Wind Farm:** adviser to financiers
- **Hallett 4 Wind Farm:** adviser to financiers
- **Portland Wind Farms (Stages 1-4):** adviser to Pacific Hydro (owner)
- **Pacific Hydro Sale:** adviser to IFM on its sale of Pacific Hydro to State Power Investment Corporation of China

FULL SERVICE RENEWABLES OFFERING

Herbert Smith Freehills has an unrivalled understanding of the Australian renewables sector derived from a proven track record acting on the development, acquisition, financing and commercialisation of a considerable number of renewables projects (both domestically and internationally, including in Asia).

At the forefront of the renewables market, we do not just understand 'market practice', we have helped to set it. We have acted on a number of innovative 'first of kind' renewables projects including:



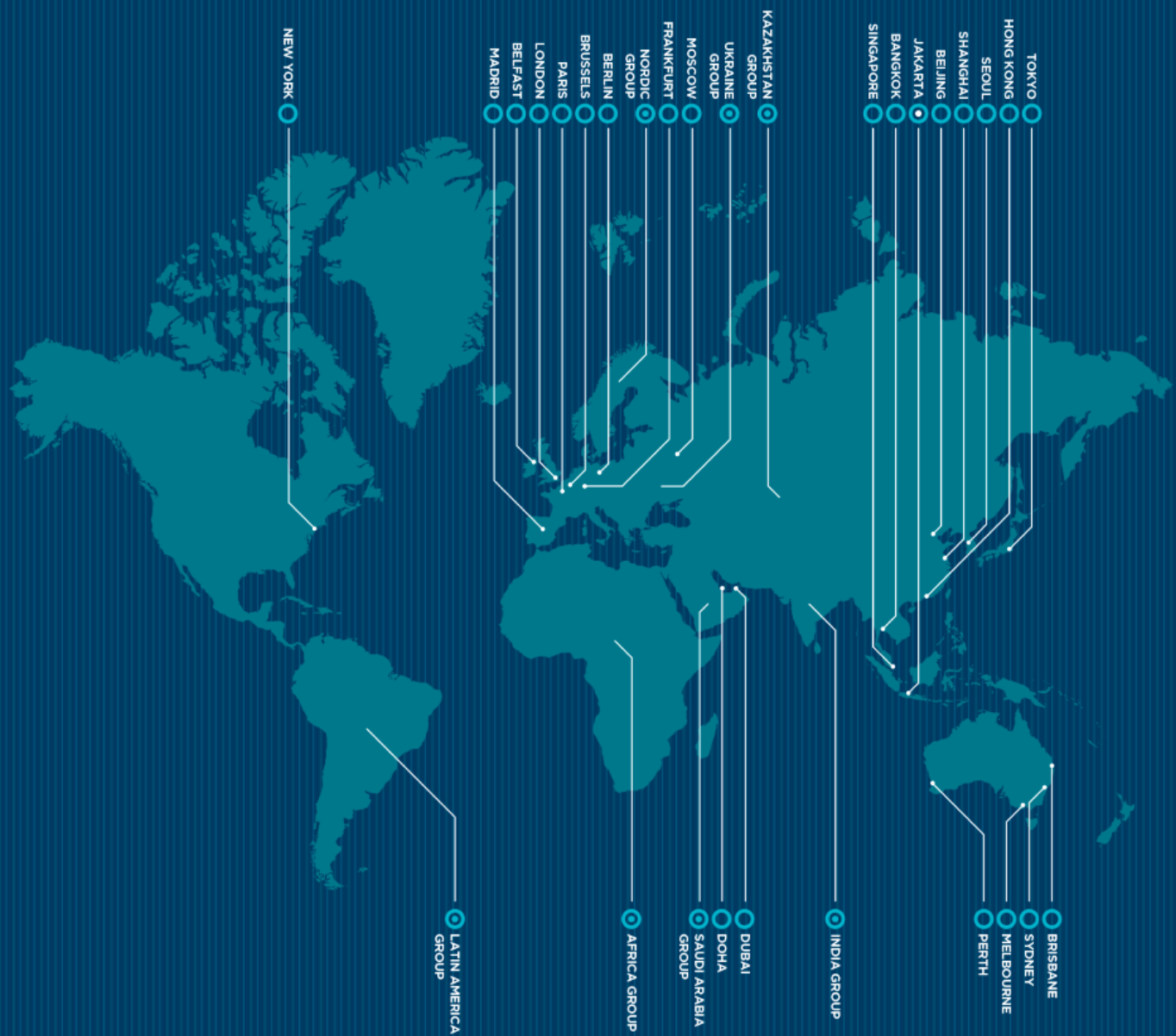
This unmatched experience means that we not only have a thorough understanding of the challenges and opportunities relevant to renewables projects across the various States and Territories in Australia, but have developed IP and commercial solutions to accommodate these challenges and maximise opportunities. Put simply, we bring to bear commercial solutions.

Leading solar and wind energy practice

We have been **involved in over 90% of the large scale solar projects in Australia to achieve Financial Close to date**, including acting in key roles on 10 of the 12 ARENA funded large-scale solar projects to recently achieve Financial Close. Our team has been involved in a large range of domestic and international solar and wind energy projects (including in South East Asia and Japan), as well as with the commercialisation of new solar energy technologies.

In the last twelve months alone, we have acted on double the number of solar deals than our nearest competitor **we have had a role on almost all of the recent wind farm projects to achieve financial close in Australia in the last 12 months** including Bodangora, Mt Emerald, Silverton, Mt Gellibrand, White Rock and Kiata.

"They are clearly a market leader in the renewable energy space" - *Chambers Global 2016*



- Herbert Smith Freehills office
- Associated office
- Group

Legal services are provided in Indonesia, in Jakarta, through Herbert Smith Freehills LLP's ("HSF") association with Hiswara Bunjamin & Tandjung ("HBT"). HSF and HBT are two independent firms which have a formal association in Indonesia.

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