A close-up, low-angle shot of a wind turbine's nacelle and hub. The nacelle is a large, white, cylindrical structure with a visible seam. The hub is a complex, dark-colored structure with multiple blades attached. The background is a bright, overcast sky.

Renewable energy market

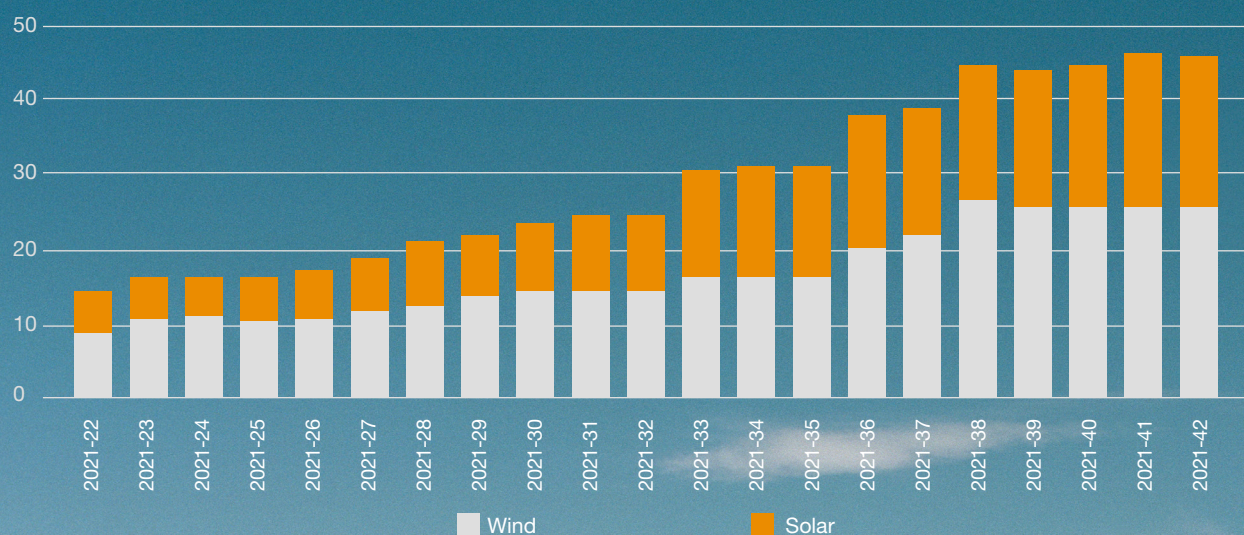
gives developers
and investors
pause for thought

Australia's renewable energy market is changing rapidly, and developers and investors are joining forces to steer projects through to financial close. To make such partnerships successful, there are several important steps that each party can take.

Australia's renewable energy supply has undergone significant change in generation mix with installed wind and utility solar increasing more than 200% from 2016 to 2019¹ - and this transition is expected to continue into the future. When developers and investors are prepared to invest in this rapidly changing market, they can set themselves up for long-term growth and higher returns. But those who fail may be left behind in our energy transition.

With uncertainty washing through the market, it's vital for developers and investors to read the conditions and position themselves in well-balanced partnerships. In this paper, we highlight the forces shaping the market, and explain how developers and investors can unite for mutually beneficial results.

Wind and solar forecast capacity (GW)



Source: AEMO 2020 ISP, Figure 9, Central Case²

1 AEMO 2020 Integrated System Plan (ISP)', Australian Energy Market Operator, www.aemo.com, accessed 18 July 2021

2 'Annual Market Performance Review 2020', Australian Energy Market Commission, www.aemc.gov.au, accessed 18 July 2021

Reading the conditions

Australia's renewable energy transition is increasing in size propelled by state governments and sophisticated investors who have capital to back new projects. Corporates are transforming their organisations to meet environmental, social and governance expectations, and seeking ways to build their net zero carbon credentials. Momentum is gathering for those who are ready to seize it. However, Australia's power system is complex, with early stage projects facing a number of challenging risks to reach financial close. These include securing offtake agreements, connecting to the grid, and navigating the changing regulatory framework. Projects and investors are facing increasing uncertainty in forming a view of these risks and a long term view of the energy market given the rapid pace of change. Before leaping in and striking a deal in today's energy development market, it's vital to understand the local market conditions to achieve the right balance with any potential partner.

Below, we outline a combination of challenges that are increasing the cost and complexity for developers, and how great results can be achieved when investors and developers combine effectively.



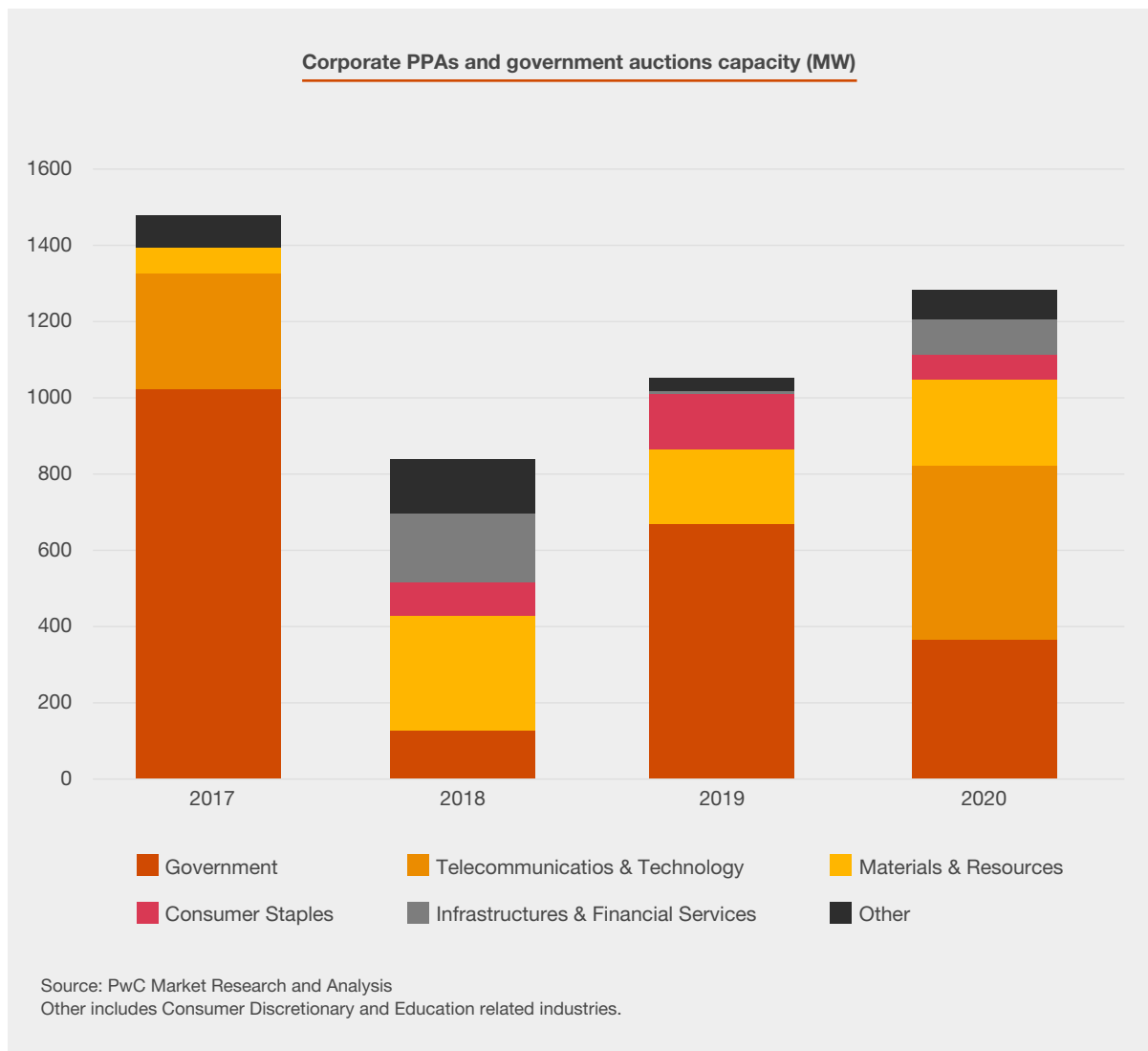
Uncertainty ahead

While the Australian market is becoming more complicated and the rate of change is increasing the levels of uncertainty, there are several discernible trends.



Market structure

Large energy users are accelerating their purchasing of renewable power directly from generators, using corporate power purchase agreements (PPAs), as demonstrated below. As the corporate PPA market developed, large energy users have become more sophisticated in their understanding of the key risks and potential mitigants. A corporate PPA may now include complexities such as potential load matching, contracting in multiple states and more stringent technical and financial guarantees. This complexity has seen a trend towards purchasing from established players.





Increased engagement from stakeholders

Developers will often need to raise capital to fund the construction of the projects and transition ownership to a third party. There is an increasing trend for local communities, governments, offtakers, networks and landholders taking a greater interest in the ultimate owner of the renewable project at an earlier stage.



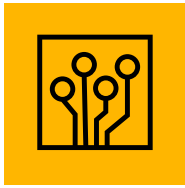
Government relationships

There is increased state government involvement in Australia's renewable energy policy and market. For developers, this only increases the need for strong state and federal government relationships when seeking offtakes, regulatory approvals and connection to the grid. Developers that lack expertise in lobbying and advocacy may find it challenging to successfully bring projects to financial close and commercial operations. They need to seek out expertise, experience and networks they can leverage.



Regulation

Australia's energy transition is prompting a new round of regulatory change from the electricity market bodies including the Energy Security Board, the Australian Energy Markets Commission, the Australian Energy Market Operator (AEMO) and the Australian Energy Regulator, with some unintended economic consequences for developers in certain parts of the grid. This can put developers' projects at the mercy of electricity rule changes (in extreme cases, regulatory changes could inadvertently jeopardise connecting to the grid). It's therefore vital that developers have sight of all regulatory proposals and forthcoming changes, actively advocate for their interests through rule change consultation processes and have the funding available to complete additional studies that may be required to successfully develop a project.



Technology

Technology improvements are driving down the price of energy generation and storage, supporting the drive to build more renewable energy projects.

Investors are increasingly focussed on emerging technologies including battery energy storage and green hydrogen to deploy capital and enable the energy transition. To understand the needs of an investor, early stage engagement and project design will help optimise the project and unlock current and future value.



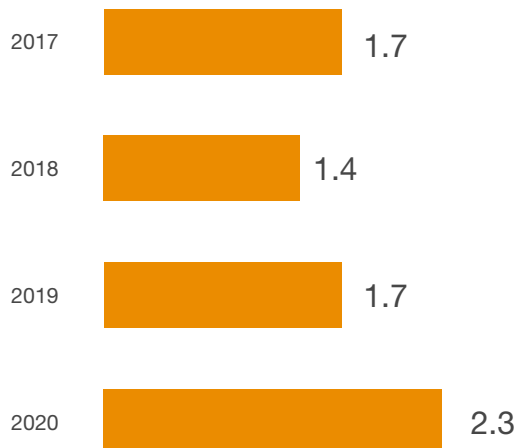
Grid congestion

The volume of new generators seeking to connect to the grid has grown exponentially as part of the energy transition. For example, Powerlink received over 120 connection applications during 2017/18, a significant increase on all previous years.³ This increase in volume of connections has placed additional pressure on the already complex power system. For developers, investors and contractors, this can lead to substantial (and expensive) delays.

One of the consequences of grid congestion has been the change to technical modelling requirements for generators to achieve an offer to connect. These changes have led to an increase in costs, and delay for developers to achieve financial close on their projects.

The figure below demonstrates the increasing time faced by solar developers to achieve financial close in the National Electricity Market (NEM).

Average duration between Development Approval and Financial Close for large scale solar projects* (yrs)



Source: AEMO^{4,5} Generation Information 2020,2021, Inframation⁶, PwC Desktop Research

*Excludes projects less than 30MWp.

‘Investors have consistently rated the grid connection process as the top business challenge since July 2019.’⁷

³ Transmission Annual Planning Report 2018', Powerlink, www.powerlink.com.au, accessed 20 July 2021

⁴ NEM Generation Information data, AEMO, July 2020

⁵ NEM Generation Information data, AEMO, July 2021

⁶ Transactions data, Inframation, July 2021

⁷ 'Clean Energy Outlook Confidence Index July 2021', Clean Energy Council, www.cleanenergycouncil.org.au, accessed 20 July 2021

A person in a dark jacket and hooded sweatshirt is walking away from the camera on a wooden pier. The pier has a metal railing. In the background, there is a body of water with several sailboats and a city skyline with many skyscrapers under a sunset sky with orange and yellow hues.

Tomorrow's outlook

Ultimately, these market challenges and complexities add up to increased cost and delay for developers. And that's in an environment where it's already becoming more expensive to develop renewable assets due to the scarcity of new sites with (relatively) easy land access, reasonable capacity factors that allow affordable construction, and with strong grid connection. Investors have consistently rated the grid connection process as the top business challenge since July 2019.⁸

Smaller developers are often excellent in their areas of specialty, but may lack the capital or credit support to complete or sign a grid connection agreement or navigate power purchase agreements procurement processes that often include a minimum financial eligibility criteria.

Such increased complexity makes it harder for developers to fund their projects, secure offtakers, and achieve financial close. This is increasingly driving the need for developers to secure suitable investors at an earlier stage than in the past.

The good news is that investors are out there, although they are seeking more influence over development projects.

In future, we expect to see continued consolidation, with developments increasingly steered by large strategic investors and infrastructure funds.

‘The proportion of projects that have achieved financial close that were owned by traditional developers, has decreased from 30% to 22% from 2017 to 2020’

⁸ 'Clean Energy Outlook Confidence Index July 2021', Clean Energy Council, www.cleanenergycouncil.org.au, accessed 20 July 2021

Market consolidation

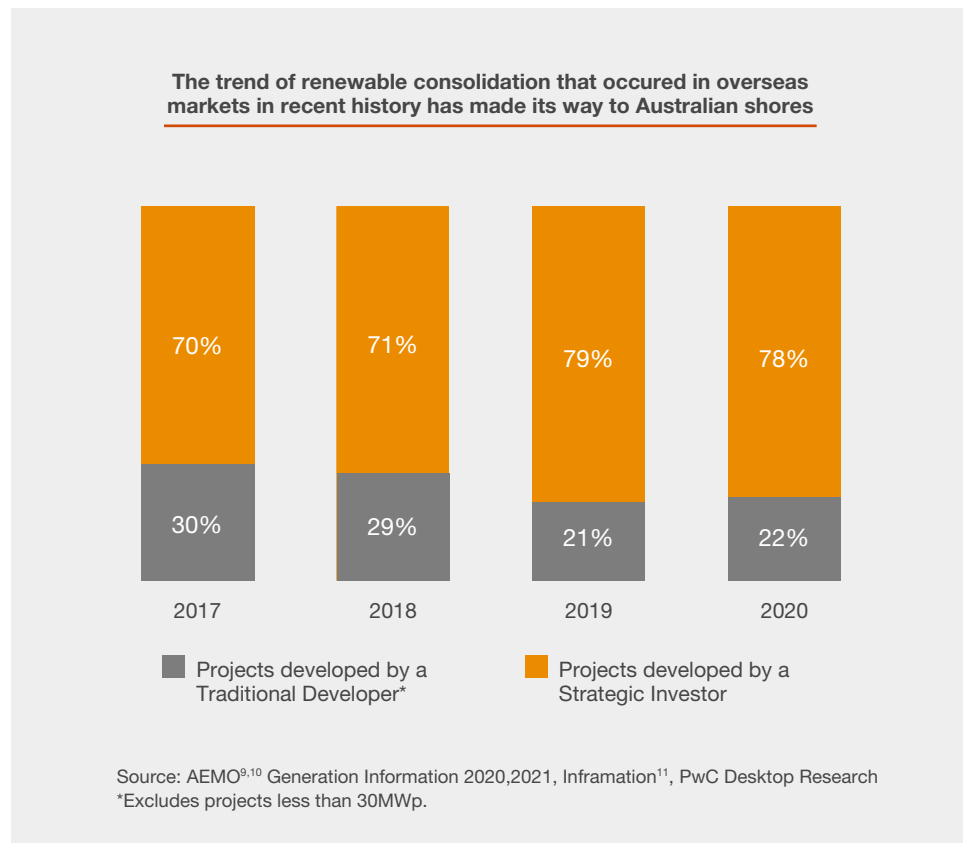
When considering new partnerships, developers and investors need to think at least three-to-five years ahead and understand where the development and commercial environment is heading. In Australia, disruption in the renewable energy market is just getting started.

Partnerships are often complex and always unique, but renewable energy deals have traditionally followed one of two broad categories:

1. Developers (large or small) take projects to the 'ready-to-build' stage, then sell the project to an infrastructure fund or large strategic investor.
2. Established entities develop the project themselves, then they build and own it (occasionally selling down all or some of their interest).

However, the dynamic market forces we have described are changing the shape and structure of current and future deals. On one side, developers are looking for earlier access to capital and deal certainty. On the other, large strategic investors (be they utilities, oil & gas companies or infrastructure funds) are increasingly seeking to influence renewables developments, avoid expensive "cost of capital" auctions at the ready-to-build stage and avoid costly individual sales processes to secure pipeline to enable them to plan, while also focussing on their need to decarbonise and manage a larger portfolio of renewable generation assets.

As demonstrated, successful developments are increasingly developed by larger developers that seek to own renewable assets through construction and into the operations phase.



9 NEM Generation Information data, AEMO, July 2020

10 NEM Generation Information data, AEMO, July 2021

11 Transactions data, Inframation, July 2021



Two

Partnership structures

At PwC Australia, we have experienced a range of deals both from developers and investors on buy-side and sell-side transactions. Our experience shows that while every deal is unique, they are usually built on one of two structures:

- 1 Investor purchases all or part of the development company
- 2 Investor purchases a specific pipeline of projects

1

Investor purchases all or part of the development company



When a large strategic investor purchases all or some of a small developer, they gain access to the local talent, expertise and track record of that team. Typically, a developer will have several projects at varying stages of maturity – so an investor also gains part or all the portfolio of (current and future) projects, as well as the scale and geographic spread that comes with that.

The investor values spreading asset specific risks across a portfolio, and will therefore place value on the developer's capability and proven track record of execution to achieve successful delivery of the pipeline of assets.

From the developer's point of view, these kinds of deals provide an upfront payment recognising their work to date and certainty via pipeline funding. There are also potential benefits in gaining access to the resources of a large enterprise (e.g. greater security, governance, technical, construction and government relations expertise).

On the flipside, however, after a buy-out a developer can become 'a small cog in a large wheel', and will be expected to cede some control to the investor. The developer must also be prepared to share the financial upside of successful developments.

2

Investor purchases a specific pipeline of projects



The other common partnership model involves a large strategic investor buying all or some projects that are in the developer's pipeline. In this approach, the investor secures a ring-fenced pipeline of the development company's projects. Set milestones are agreed for each project, and responsibilities allocated between the investor and the developer.

These kinds of arrangements can be an effective way for investors to mitigate risk. The initial investment is likely to be less when purchasing a discrete set of projects. Another advantage for the investor is that the developer typically retains more 'skin in the game' for the projects they are tasked with delivering.

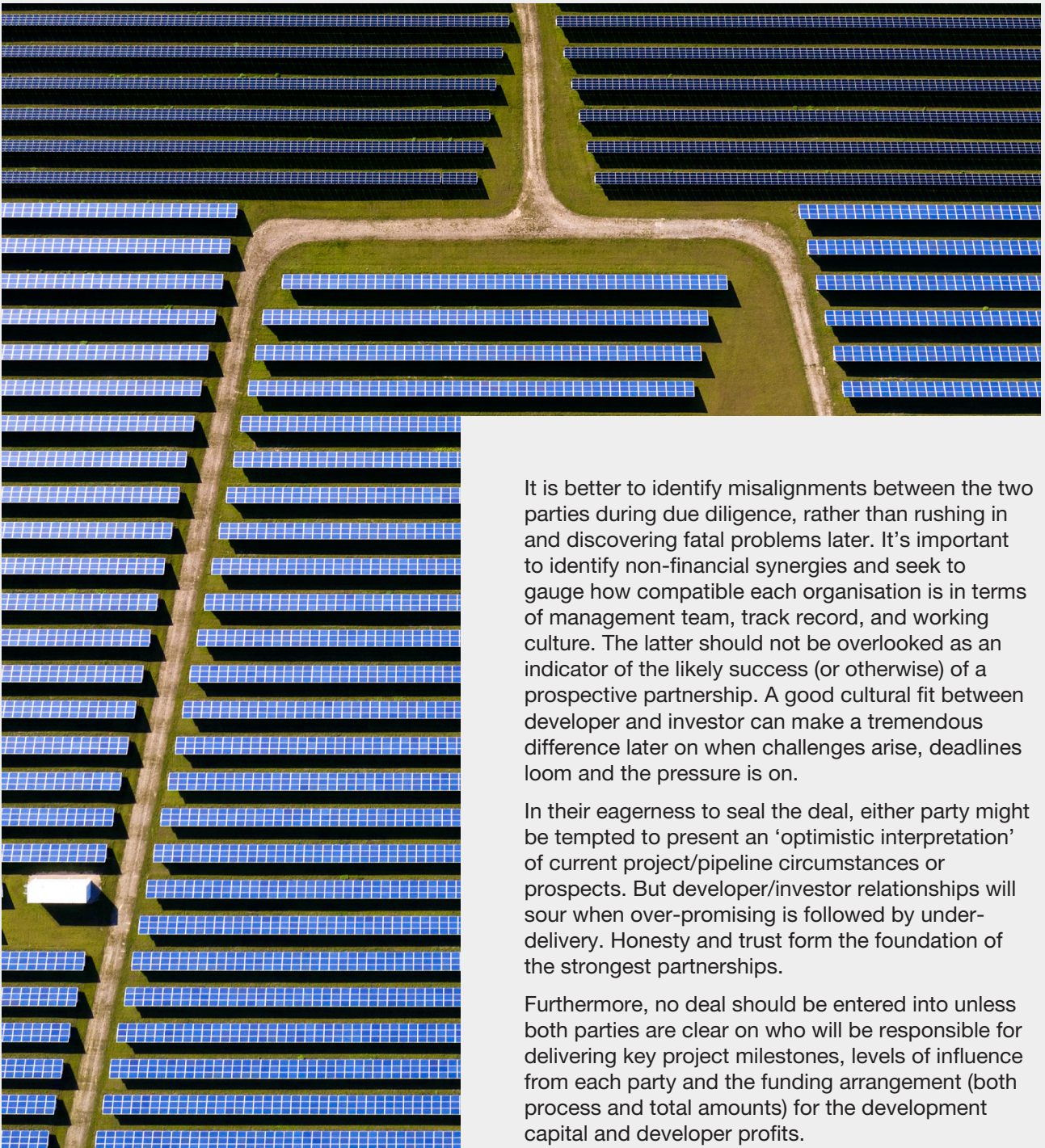
For developers, these partnerships can offer a greater level of autonomy; allowing them to remain working in their smaller, agile environment. Limiting the transaction to a specific portfolio of projects also provides the freedom to plan their future independently. Indeed, both parties are free to go their own separate ways (or, indeed, expand their partnership) after the conclusion of some or all the projects.

Under this model, increased focus is placed on both the quality of the existing pipeline and the developer's expertise.

The obvious downside for the developer is that, by retaining full ownership of their organisation, they receive a smaller financial investment. At the same time, they will still cede some influence over the projects they work on, and compromises must still be made with the investor.

Before taking the plunge

As well as understanding the prevailing market conditions, it's important that investors and developers conduct due diligence regarding potential partners. This helps ensure both parties enter negotiations with a clear, realistic view of one another's expectations, capabilities and risk appetites.



It is better to identify misalignments between the two parties during due diligence, rather than rushing in and discovering fatal problems later. It's important to identify non-financial synergies and seek to gauge how compatible each organisation is in terms of management team, track record, and working culture. The latter should not be overlooked as an indicator of the likely success (or otherwise) of a prospective partnership. A good cultural fit between developer and investor can make a tremendous difference later on when challenges arise, deadlines loom and the pressure is on.

In their eagerness to seal the deal, either party might be tempted to present an 'optimistic interpretation' of current project/pipeline circumstances or prospects. But developer/investor relationships will sour when over-promising is followed by under-delivery. Honesty and trust form the foundation of the strongest partnerships.

Furthermore, no deal should be entered into unless both parties are clear on who will be responsible for delivering key project milestones, levels of influence from each party and the funding arrangement (both process and total amounts) for the development capital and developer profits.



Taking the plunge as a **developer**

To set themselves up for successful negotiations and partnerships, developers should begin with an objective look at their own organisation and portfolio of projects. This will enable developers to:

- Articulate their core strengths and capabilities to investors
- Identify areas that could benefit from the input and expertise of a large investor
- Outline realistic project timescales and expectations for connecting to the grid
- Clarify non-negotiable features of any prospective deal, and any areas where there may be a willingness to compromise.

Armed with this knowledge, developers will be well-placed to weigh up a potential deal. There are several questions that can assist further in this task. Developers that can take a clearly identified product to the market will be in a good position to execute a transaction with the right investor.

Questions for developers to ask

- Am I more likely to succeed by entering into this relationship?
- What is the investor's appetite for the Australian energy market? How does this fit with their broader decarbonisation strategy? Do they have stated total capacity or megawatt goals globally/ domestically?
- How would we fit within this investor's portfolio and broader strategy for the Australian energy market? How do we ensure our projects will remain a priority? What is our competition internally for capital?
- What milestone payment structure are we prepared to accept? Do we have minimum payment amounts required at certain milestones?
- What elements of my projects remain in my control? Will we retain enough influence to ensure we receive payments and continue to add value to our projects?
- What is unique about this potential investor? What resources, networks and expertise might we gain from being part of this specific group?
- How does this investor's strategy, culture and governance align with our organisation?
- What level of governance and reporting will the investors require? What enhancements (if any) will be required to our current governance structure, and can we deliver on these requirements?



Taking the plunge as an investor

Investors should enter any negotiation from a position of respect for the developer's expertise, skills and methodology. They should also be clear on what they can offer developers, in addition to access to capital.

To create a successful partnership, investors should be specific and up-front about how and when they expect to be involved in decision-making, and what delegations, checks and balances they will establish. Key accountabilities for developers (and investors) must be clarified up-front, to avoid ambiguity or surprises further down the track.

And investors should also seek to validate the developer's proposals and understand the risk profile of the transaction (e.g. a deal will likely include a range of projects, only some of which will reach financial close).

Overseas investors are most likely to succeed when they tailor their strategy to the unique Australian environment including due diligence on the regulatory landscape and the local energy market (e.g. customer needs, including corporates and retailers). State departments and Federal government bodies (e.g. Clean Energy Finance Corporation and Australian Renewable Energy Agency) are increasingly involved in investment and planning decisions for network augmentation. In order to maximise the chance of success for projects, foreign investors should have a clear strategy for government interaction and engagement. Investors should be prepared to authentically engage with the local community for example hiring local people on the ground and financially investing in the community.

Questions for investors to ask

- What is the developer's track record and history of successful projects?
- What method does the developer follow to identify projects and sites? What are the developers' differentiators from other competitors?
- How is the developer internally resourced and structured?
- What reliable relationships does the developer have with third parties?
- Does the developer have a history with securing offtake, or can they help us with it?
- How can we support the developer? Does the developer expect our assistance to reach grid connection and financial close?
- What are the gaps in development capabilities after considering both our capability and the developer's capability? How can these gaps be filled?
- What are the developer's expectations for price and value from its portfolio?
- How does this developer's culture align with our organisation?
- How is this developer managing competition to connect to the grid, so that network connection is secured and ready when their projects are?



Despite the many challenges, the Australian renewable energy market continues to create opportunities for well positioned developers and astute investors willing to embark on mutual beneficial partnerships. Taking the time to consider the several steps we outlined in this paper – and seeking the right advice and support – will set you off to a good start in establishing a successful partnership and reaping long-term rewards.

Contacts



Chris McLean
Partner, Integrated Infrastructure,
PwC Australia
chris.mclean@pwc.com



Katie Barnett
Partner, Integrated Infrastructure,
PwC Australia
katie.barnett@pwc.com



Danny Touma
Partner, Integrated Infrastructure,
PwC Australia
danny.touma@pwc.com



Dane Van Den Bogaardt
Associate Director, Integrated Infrastructure,
PwC Australia
dane.van.den.bogaardt@pwc.com



Irene Lee
Associate, Integrated Infrastructure,
PwC Australia
irene.b.lee@pwc.com

pwc.com.au/integrated-infrastructure

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