

➤ Storage

OPPORTUNITY

As Australia's energy system transitions from black to green, there is a growing need to supplement our ever-increasing sources of renewable power generation with dispatchable power.

Starting in 2017 with the Hornsdale Power Reserve, there has been a real trend in the industry towards the construction of utility-scale storage systems, principally battery and pumped hydro. At one end of the spectrum are the Federal Government's Snowy 2.0 pumped hydro project and the potential 'Battery of the Nation' project in Tasmania. However, alongside these state-sponsored projects are many examples of the private sector developing and investing in storage projects, with reports in early 2021 claiming that there are around 7,000MW of storage projects in the pipeline in Australia.

KEY ISSUES

One of the most interesting aspects of battery and pumped hydro projects is that they are truly multi-purpose, being able to be used as traditional generators (where power is sold into the market in return for the pool price) but also to earn revenue by providing a range of system support services.

Issues we see arising in storage projects include:

OFFTAKE STRATEGY

- How will the asset owner monetise the storage facility – will it be fully contracted or partially merchant; subject to a tolling arrangement or a traditional PPA?

RET LIABILITY

- While the asset owner will be liable under the RET scheme in terms of the power drawn from the grid to charge the battery or to run the pumps; can the storage facility create LGCs?

EPC/O&M

- Roundtrip efficiency / degradation profile / performance warranties; sizing of liquidated damages; allocation of connection risk and water source risk; active replacement of modular batteries to manage performance.

APPROVALS

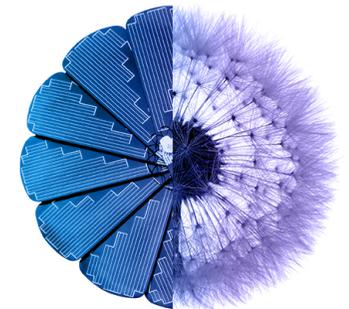
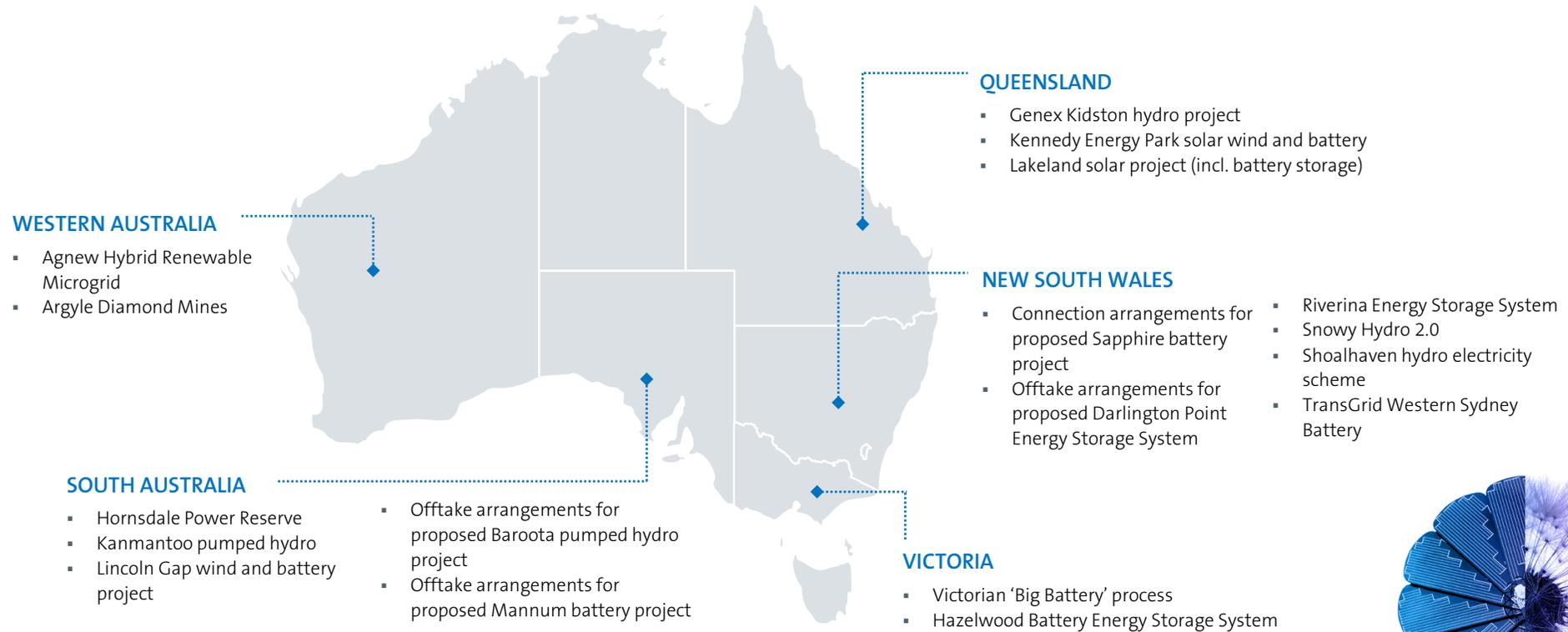
- Battery storage can be reasonably straightforward given its small footprint, modular and portable nature, and generally low environmental / amenity impacts.
- Pumped hydro can have a larger footprint and more complex environmental impacts (particularly flora and fauna, but also potentially native title and Aboriginal heritage), is likely to involve more extensive environmental impact assessment and a longer / more complex approvals process.

FINANCING

- Clarity around the offtake strategy (see above) is key. As with any other energy project, the greater the level of contracted capacity, the greater the potential for higher debt sizing.
- Technology risk is at the forefront of financiers' minds. Technical advice is therefore critical for new and unproven storage technology.
- Wrapped EPC arrangements that address the key risk areas (see EPC / O&M opposite) are fundamental to bankability.

OUR EXPERIENCE

This map demonstrates our key storage experience around Australia.



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