

WA garnet miner to build 3MW solar, wind, battery storage plant

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One Step Off The Grid

A garnet mining company in Western Australia has become the nation's latest big energy user to turn to renewables, for a cheaper and more reliable supply of industrial energy.

The Australian arm of the world's largest industrial garnet producer, GMA Garnet, has signed a long-term power purchase agreement with WA-based Advanced Energy Resources for the output of a 3MW wind and solar farm with battery storage, to be built south of Kalbarri, Western Australia.



The deal – announced at the Global Renewables in Mining Summit in Perth on Friday – will see AER build, own and operate the \$8 million project, which will also be the first grid connected wind and solar farm with battery storage in the state.

It follows the industry-leading example of Korean zinc refiner, Sun Metals, [which is building a 116MW solar farm south of Townsville, in Queensland](#), that will provide around one-third of its electricity needs, while also underpinning expansion of its north Queensland refinery business – already one of the biggest energy consumers in that state.

GMA Garnet's 3MW hybrid renewables power station will initially supply almost 70 per cent of the miner's electricity needs, with the aim of transitioning it to 100 per cent renewable energy.

It will also deliver a more secure power supply to the mine, which is located at the fringe of the Western Power grid, 120km from the nearest substation.

AER said its 2.8MW (peak output) battery inverter would smooth the plant's electricity output during times of variable wind and cloudy weather, while providing uninterrupted electricity supply to the mine during network outages. The battery will also be designed to provide on-demand network support in the future.

GMA Garnet's chief financial officer, Grant Cox, said the wind and solar farm would be a "truly practical way" of reducing the mining company's input costs while also hedging against the "ever increasing" cost of electricity.

“Price certainty is an important consideration for our business which sells high quality garnet to an international market,” Cox said on Friday.

“We are proud to be moving our operation to have the lowest carbon emissions in the industry.”

AER managing director, Luca Castelli, said the “ground-breaking project” would demonstrate how large energy users can reduce costs, while providing tangible benefits to regional electricity networks and fringe of grid areas.

“We have proven through past projects that embedded renewable energy generation is cheaper than traditional fossil fuelled generation, and will play a key role in reducing both electricity costs and greenhouse gas emissions for WA industry,” Castelli said.

“AER’s commitment to renewable energy is evident in our existing generation mix, and will be reinforced in coming months as we announce a number of new projects,” he said.

Chris Twomey, transaction consultant at the Australian Renewable Energy Agency said ARENA was currently in talks with several WA companies to build renewable energy projects combined with resources.

Twomey said he also regularly holds workshops with resource companies assessing whether to integrate solar and wind power for off-grid sites, often advising companies to start small and scale up over time.

But the shift to renewables by big energy users is not confined to the resources industry, or to companies working on the fringes of Australia’s networks. [As we reported here on Wednesday](#), Australian hydroponics vegetable supplier Nectar Farms is building a 196MW wind farm to power its new 40 hectare glasshouse, which is being near Stawell, in Victoria, on land once owned by a recently closed gold mine.

The wind farm will be accompanied by a 20MW/34MWh battery storage facility to ensure uninterrupted supply. All up, the greenhouse and renewables projects are expected to generate \$560 million of investment, provide 1,300 jobs during construction, and nearly 300 permanent jobs and another 150 indirect jobs.

For GMA Garnet, commissioning of the wind, solar and storage plant is expected to occur early in 2019, with the project’s wind turbines having already arrived in Perth, and approvals underway.

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