
Perth WA: Tuesday, 12 March 2024

Pacific Energy hybrid power systems fuel renewable energy pathway for Westgold

- **Pacific Energy has replaced six diesel power stations with four solar-BESS-gas hybrid systems for Westgold Resources Limited**
- **Systems design centres around virtual generator BESS as the power system backbone and features hydrocarbons-off functionality**
- **The hybrid systems will reduce carbon emissions by up to 57,000 tonnes per year**

Pacific Energy has successfully designed and delivered four industry-leading hybrid power systems for Westgold Resources Limited's (ASX: WGX / OTCQX: WGXRF – Westgold) gold mining operations in Western Australia's Mid West region.

The hybrid systems, which have a combined capacity of 82MW, have been delivered under a seven-year build-own-operate agreement and comprise 28MW of solar, 11.5MW of battery energy storage (BESS) and 42.5MW of high-efficiency gas generation.

The four systems, located at Westgold's Tuckabianna, Bluebird, Fortnum and Big Bell facilities, were delivered concurrently and in parallel with Westgold's operational expansion projects at all four sites. They replace six diesel-fired plants and are expected to collectively displace 38 million litres of diesel every year and cut carbon emissions by up to 57,000 tonnes annually.

The Tuckabianna system, which was fully commissioned in August 2023, achieved an average of 31% solar penetration between November 2023 and January 2024, peaking at 36.9% in December.

Westgold's Managing Director and CEO, Wayne Bramwell, said powering Westgold's operations with renewables was at the heart of its Clean Energy Transition Project, which is set to improve the company's environmental efficiencies and reduce operating costs.

"Moving towards renewables works for Westgold as a business because it drives costs out. It also works for the environment because it significantly reduces carbon emissions and it sends a signal about our long-term view of building a sustainable business," Mr Bramwell said.

Pacific Energy's Chief Executive Officer, Jamie Cullen, said his company's strong, reciprocal relationship with Westgold has been central to achieving excellent outcomes for both parties.

"This complex project showcases Pacific Energy's commitment to delivering sustainable, cutting-edge solutions for our clients, even in the very challenging circumstances we encounter in remote locations," Mr Cullen said.

"Pacific Energy and Westgold have worked side-by-side in the Mid West's tough environment to deliver these systems safely, with zero lost time injuries. And by delivering the hybrid systems concurrently, we've been able to identify different response scenarios at each location and implement those learnings across the board to optimise system capabilities."

Pacific Energy centred the design of the hybrid systems around its virtual generator (VG) BESS technology, which seamlessly integrates renewable energy sources and dynamically stabilises the power systems, marking a shift away from thermal generation as the primary source of system stability.

An evolution of grid forming BESS technology, VG BESS can mimic the characteristics of rotating thermal generators, providing for the first time the ability to stabilise large-scale power systems without burning fuel or using legacy technologies like synchronous condensers.

The new hybrid systems also have emergency hydrocarbons-off functionality, which enables seamless mining operations using solar and BESS during system outages and other critical situations.

“We’re approaching our systems design with a future-focused mindset, so they can support the increasing sophistication of renewable energy technologies for years to come, and to ensure we’re delivering the decarbonisation outcomes our clients are looking for,” Mr Cullen said.

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Project video

<https://vimeo.com/user168195138/westgold-hybrid-systems>

Images

Tuckabianna Hybrid Power System



Big Bell Solar



Bluebird Solar



Fortnum Solar



About Pacific Energy

Pacific Energy is an Australian market leader in the provision of sustainable distributed energy, operating for over four decades, with owned-and-operated assets at 46 sites nationally and more than 750MW of contracted capacity under management.

A trusted partner at the forefront of the clean energy transition, Pacific Energy is uniquely positioned to offer clients a complete in-house experience that delivers renewable and traditional power generation solutions from design, manufacturing and construction through to commissioning and operations and maintenance.

With unrivalled capability across all energy technologies, Pacific Energy has demonstrated experience integrating solar, wind, green hydrogen and battery energy storage into new and existing remote power systems, with an end goal to maximise efficiencies and minimise emissions.

Pacific Energy is headquartered in Perth, Western Australia and has operations in Kalgoorlie, Victoria, Queensland, South Australia and the Northern Territory. It is owned by QIC, a globally diversified investment manager with more than A\$100 billion in funds under management.

About Westgold

Westgold Resources Limited (ASX: WGX / OTCQX: WGXRF) is an innovative and progressive West Australian gold producer located in the Murchison and Bryah regions of WA. The Company has tenure of more than 1,300 km² and operates four underground mines and three processing plants with an installed processing capacity of approximately four million tonnes per annum.

Operating on a 'hub and spoke' model, Westgold's Murchison mines feed ore to its Meekatharra and Tuckabianna processing hubs and its Bryah Basin mines send ore to the Fortnum hub.

Westgold owns and operates its mines. With this in-house expertise and a modern underground mining fleet, Westgold has greater cost control and operating flexibility. The Company's workforce has substantial career development opportunities across multiple operating mines and processing plants.

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