



## Case Study

**FIMER's PVS980 Central Inverters will help power nearly 30% of a lead and silver mine in Western Australia.**



*Image Supplied - Pacific Energy*

**Abra Base Metals Mine** is a new high-grade lead-silver mine currently being constructed between Meekatharra and Newman in Western Australia (approximately 1,000km northeast of Perth).

Due to the remote nature of the mine, ensuring reliable energy to power the site was critical. Galena Mining wanted to incorporate a power station that would help lower the mine's operating costs and reduce its carbon footprint.

The hybrid thermal and renewable power station is owned and operated by **Pacific Energy**, an industry leader providing remote, off-grid energy in Australia.

The hybrid power station is a 21MW fully integrated system combining a 6MWac solar farm, 2MW Battery Energy Storage System (BESS) with a 10MW high-efficiency/low emissions gas generation plant and 1,100kl LNG storage and regas facility.

Pacific Energy designed, constructed and commissioned the solar farm and BESS solution, which incorporates the following:

- 15,024 mono facial 460W panels with a NEXTracker single-axis tracking system
- 2 x 4.6MW (4,565kVA) FIMER PVS980-58 Central Inverters
- 2MWh Battery Energy Storage System



In mid-2021, FIMER was engaged by Pacific Energy’s renewables division to provide an 8.8MVA solution to meet the site’s energy requirements. FIMER provided several solutions, but the PVS980 4.6MW solution was selected for its cost-effectiveness and performance capabilities.

“We were extremely impressed with the capability and responsiveness of FIMER’s local and global product team throughout the project, specifically the product selection process and the commissioning of the products. Their level of communication provided us with comfort that our requirements had been met and we could meet our project milestones,” said Daniel Jackson, Pacific Energy’s Managing Director - Renewables.

FIMER’s PVS980 solution has a large install base worldwide, with many located in harsh environments. The Abra Base Metals Mine is in the Australian desert, where summer temperatures can reach 45-50 degrees Celsius. The performance of the PVS980 inverter when derating at high temperatures was an essential requirement. FIMER’s proven technology allowed the teams to plan for and ensure the size of the inverter could still provide sufficient generation when derated at temperatures above 35 and 50 degrees Celsius.

Jason Venning, FIMER Australia’s Country Manager, highlighted this, saying, “FIMER’s PVS980 inverters have proprietary technology using self-contained two-phase thermo-siphon heat exchangers, which are totally passive and provide high performance with a low-pressure drop, with an efficiency equivalent to liquid cooling and with the simplicity of an air-cooled system. This enables the inverters to be installed in high temperatures while still providing reliable performance.”



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The PVS980-58 5MVA is also extremely durable and is equipped with extensive electrical and mechanical protection to provide a long and reliable service life of at least 25 years.

FIMER's PVS980 was delivered in January 2022 in time for the solar farm's construction. During this time, FIMER provided technical training to Pacific Energy engineers to commission and maintain the PVS980 units. One of FIMER's technicians visited the site in early November to commission the two central inverters and certify their staff to become authorised technicians.

The solar farm will meet nearly 30% of the mine site's power needs. The solar generation and battery energy storage solution has an expected annual output of over 16,602MWh and will reduce CO<sub>2</sub> emissions by approximately 11,800 tonnes per annum.

### **Thinking about your next installation project?**

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