



Providing renewable off-grid power for a remote gold mine

CUSTOMER

Northern Star Resources

LOCATION

Porphyry Gold Mine,
Western Australia

SECTOR

Mining

KEY FACTS

4.4 MW

Solar farm

2 MW / 1 MWh

Battery storage

1.67 million L

potential fuel savings p.a.

4,486 TCO₂

Estimated reduction p.a.

10 year

PPA agreement

THE CHALLENGE

Reducing diesel consumption and costs in challenging conditions

In remote area of Western Australia, nestled amidst challenging terrain and extreme temperatures, the Porphyry Gold Mine faced the daunting task of reducing diesel consumption while operating within stringent space constraints. With the aim of both minimising environmental impact and cost, the site embarked on a strategic initiative to overhaul its energy consumption practices.

Since 2022, we had been providing diesel power generation to the mine site. However, with a commitment to sustainability and cost efficiency, we eagerly embraced the opportunity to partner with Northern Star Resources to transition towards renewables.



THE SOLUTION

Supplying a relocatable solar farm and battery storage solution

Our expert team assumed responsibility for the end-to-end provision of a comprehensive modular solar farm and Battery Energy Storage System (BESS), encompassing design, commissioning, and seamless integration into the pre-existing power infrastructure.

To supply the relocatable solar plant, we worked closely with 5B to deliver the Maverick units which allow quick deployment at lower cost.

Facilitated through a Power Purchase Agreement (PPA), our collaboration underscores a commitment to innovative energy management practices. By seamlessly integrating renewables with conventional power sources, we ensure a reliable and sustainable energy supply while optimising cost effectiveness.

THE AGGREKO DIFFERENCE

Off-grid scalable power, wherever you need it.

THE IMPACT

Cost-effective carbon reduction: Implementing a scalable off-grid power solution

The project underscores a dual focus on carbon reduction and cost savings while concurrently introducing a robust off-grid power station engineered to scale alongside the mine's operational lifecycle.

Ultimately the hybrid power station will result in substantial savings, equating to the preservation of 1.67 million litres of diesel annually and a reduction of 4,486 metric tons of CO2 emissions.

By embracing sustainable energy solutions, the mine not only mitigates its environmental impact but also secures significant economic benefits, marking a pivotal step towards a greener and more cost efficient future.