



aggreko

A futureproof power offering for a Sudanese gold mine

CUSTOMER

Manub – Sudanese affiliate of Managem

LOCATION

Wadi Gabgaba – Sudan

SECTOR

Mining

KEY FACTS

13 x

Diesel generators for phase one of a two phase project

1.2 Mt

Production capacity per year

2-4 MW

Solar hybrid offering for future commissioning



THE CHALLENGE

A quick power solution for an off-grid gold mine needing reliable power to push production

The customer Manub is an affiliate of Managem, a heritage mining company who have been operating since the 1930s. Fast forward to the present day and exploration for gold is big business with the need for exploration and expansion ever increasing.

This need to expand to find gold has seen the boost of exploration licenses, in Sudan more than 23,000 km² of recorded licenses are registered with Managem alone.

Located in the Nubian desert in northern Sudan, Manub were looking for a solution for the Wadi Gabgaba mine which needed a radical power solution change compared to their existing ageing infrastructure.

The greenfield mine in remotest Sudan is currently off-grid and lies over 600km from the capital of Khartoum. Here the temperature can be anything between 20-50°C with chances of sandstorms possible. A volatile environment.

The original set up for the open production mine was isolated gen sets which belonged to Manub. These were scattered around the site and not grouped together, not offering a reliable power offering and often needing maintenance.

Manub approached Aggreko looking for a complete power solution that would update the current infrastructure, ultimately offering peace of mind with power reliability. With the inevitable increased consumption during

production at the mine, reliable power was a must.

The solution would need to incorporate a vast amount of detailed project management, ensuring shipping and delivery of the equipment with a slick customs agreement was in place. There would be no time for delays or downtime for the mine. A flawless project plan was paramount.

THE SOLUTION

A two phase installation project involving complex project management to ensure smooth and continual power for the mine, including a future hybrid offering

After a site assessment undertaken by Aggreko it was then down to our expert engineers and dedicated technical teams to devise the best solution for the mine which would ensure operations could still take place, avoiding no downtime.

The extreme planning involved in this project ensured that everything arrived onto the site on time and made the long journey from Port Sudan into the Nubian desert without any hiccups.

The customer was assured with Aggreko due to an outstanding legacy in the mining sector, which for them, offered a strong competitive solution. The proposal of a flexible rental solution offering both thermal and hybrid power, combined with competitive rates was a no brainer for Manub. Factoring in mining operating experience, know-how and a short mobilisation period made Aggreko a clear first choice.

Due to the scale of the project the delivery was scheduled in two phases. The first phase seeing the

installation of 12.5 MW of power and the second would see an additional 14.5 MW of power added to the mine, essentially to keep up with expansion.

Speed was a factor in this project that would make or break it. The strong logistics and project management ensured that from the customer contacting Aggreko, a delivery and install time of just 5 months was all it took.

At the site, the arrival of a complete turnkey solution including 13 diesel generators, was the first phase of the project. The scalable offering ensured that this was the best solution in case energy needs changed over time or needed to be adapted.

A load management system was also in place ensuring that some of the generators would automatically start/stop depending on the load level. Of course, all came with support and maintenance should problems in this volatile environment took place.

Considering remoteness of the location & the country situation, planning was the key to everything. We started very early to liaise with customer team, our partners and subcontractors in meticulously planning each step and project managing along the way.

Suresh Venugopal,

Project Manager – Aggreko Power Solutions





THE IMPACT

Expansion of the mine continuing without downtime and a hybrid addition, offering financial and environmental advantages

The successful delivery of the first phase of this project continues to reinforce the mining sector expertise that Aggreko has built up within the industry, resulting in a happy customer.

The additional benefit is that the second phase of the project incorporates the use of hybrid technology, offering many additional advantages. A solar plant anticipated for a later commission will see reduced fuel operation costs as well as other cost savings of up to \$1m per year.

The offering by Aggreko proves to be a success with output meeting the load curve that Manub expected for this

production mine. The future developments at this site with the view to include a hybrid offering showcase the versatile approach that was devised in the conceptual phase by Aggreko.

The first phase of this project was such a success that the customer has benchmarked Aggreko for future projects in Western Africa, proving that smooth delivery and success paves the way for future business based on expertise.

Expected to last at least 12 years, the scale of this project in Sudan is something that would have not been achieved without the excellent project management from the start.

THE AGGREKO DIFFERENCE

Our power is the gold standard for your mine



aggreko

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