



Efficient, cleaner power for oil field in desert

CUSTOMER
Pharos Energy

LOCATION
Egypt

SECTOR
Oil and Gas

SEGMENT
Upstream onshore

APPLICATION
APG Main power

KEY FACTS

11 Oil wells

1.5 km

Distance between sites

\$2 million

Saved annually with our solution

730,000 litres

Amount of diesel saved annually

30 %

Reduction in gas flaring



THE CHALLENGE

Cut flaring, fuel consumption and cost for oil production site

Pharos Energy, a UK-based independent oil company, wanted to reduce gas flaring, diesel consumption and provide cooking gas to communities in Egypt's Western Desert

The site in question contained 11 oil wells and considerable distance between them – around 1.5km. Another aspect to be taken into consideration is that the power plant that currently provided the energy for the site is within an

agricultural area – so the need to cut both diesel and flaring would no doubt help protect the local area.

This was a task of many requirements and Pharos Energy needed an experienced partner with many decades of industry knowledge, including specific technical capability in dealing and treating Associated Petroleum Gas (APG) from production wells and repurposing it for use as a power generation fuel.

THE SOLUTION

Multi-faceted, efficient power solution

After initial design consultations, our engineers devised a plan that could deliver on all fronts.

Our mobile, modular equipment is ideal for logistical and site obstacles. Helping the customer switch from diesel to gas, we installed three of our gas QSK60 generators, combined with a transformer, to power the site efficiently. We took care of the 1.5km gap between sites with

our safety-approved, highly durable cabling and there were four technicians posted to the successful delivery of our solution – two for the day and two through the night.

By using our QSK60 generators, we could reduce the fuel burn that the customer's current setup had. And we successfully reduced the flare gas volume, by using it as a fuel source.



THE AGGREKO DIFFERENCE

Reduce your cost and emissions – but not reliability

THE IMPACT

Flaring, emissions and TCOE reduced

The TCOE (total cost of electricity) was driven down by our solution, as well as some other important figures.

Whilst flaring associated with Pharos' El Fayum and North Silah Deep oilfields were already low (in the order of 1 million scf/day), our three gas-fired power units, plus accessed grid power, reduced gas flaring by 30%. Based on Capitero's flaring profiles, this results in a saving of the order of 40,000 CO₂-equivalent tonnes per year (assuming 10% methane slip and a 20-year GWP).

The new power generation units enabled the company to

reduce diesel consumption by 730,000 litres per year, generating (according to Capterio calculations) an additional emission saving of 2,000 tonnes of CO₂ per year (excluding the emissions associated with fuel delivery). This led to lower fuel purchase costs to the tune of \$2 million per year -and reduced the HSE risks associated with transportation and transfer of fuel on roads in the desert

Our experts will also be replaced by a local workforce once training is complete, which will boost the community, as well as the reduced emissions for the agriculture that calls the area home.