



Sparking change: the five drivers of growth in the flare gas to power market

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Every year enough gas is flared at oil extraction sites to satisfy the annual fuel demand of the entire continent of Africa.

The practice of burning Associated Petroleum Gas (APG) released during oil production – known as “flaring” – represents a lost opportunity that operators should be seeking to tap as fuel efficiency and reducing net carbon emissions becomes ever more important.

Aggreko has been working with the oil industry for several years to put this gas to good use. In 2018, we highlighted the problems caused by gas flaring, publishing an [interactive infographic](#) outlining the scale of the problem on our website.

Alongside that, we have been deploying technology to help more Operators monetise their flared gas to power their own operations or export it to the grid. This has multiple benefits for our customers: increasing their resource efficiency, cutting fuel costs, and reducing emissions or creating a new revenue stream. We have reached 1GW of installed power capacity with projects using these technologies, which has converted around 9.5 million Standard Cubic Feet (SCF) per mw/h of APG that otherwise would have been wasted.

We have identified five factors which are driving growth in demand within the flare gas to power sector.

1) Cost reduction

Using flared gas as a fuel source can result in significant cost reductions for Operators. Using on-site gas can be much cheaper than the alternatives that are usually used to power operations including grid power, diesel or other gases such as pipeline gas, CNG.

Not only that, but Aggreko’s rental model with fixed, all-inclusive tariffs for power provision can be an attractive stable alternative to Operators who would otherwise find themselves facing fluctuating electricity bills. This offers financial benefit against the significant cost of owning and maintaining their own power assets.

2) Reducing environmental harms

Cutting emissions is a central focus of the oil industry currently. The majority of oil majors have laid out carbon emissions reduction plans as they seek to alleviate the impact of their operations on the environment. But it’s not just the big players who are taking responsibility – every operator has a role to play in creating a more sustainable industry.

Cutting gas flaring is one of the most effective ways for operators to reduce their net emissions, and has the added benefit of delivering usable power if flare to power solutions are employed, displacing the emissions that would typically be used to generate the required power by another means such as diesel.

On a national level, it can also help countries to deliver on the Paris Agreement and the [UN’s Sustainable Development Goal #13](#).

3) Compliance with environmental regulations and avoidance of fines

Governments around the world have been taking regulatory action against gas flaring, which has been the target of environmental campaigners for many years. Nigeria, Iraq and China are just some of the countries to announce measures including fines to cut levels of flaring in recent years. The pressure to reduce flaring is clear at

the international level, with the World Bank setting a target of 'Zero Routine Flaring by 2030' and we expect to see a move away from routine flaring at the top of the agenda for most operators.

As more countries seek to implement regulatory measures to discourage routine flaring, utilising flare to power operations will become a more economically attractive option for oil companies who may otherwise incur a fine for flaring activity.

4) Gas monetisation opportunities

As flare to power options become more attractive, the technical solutions for treating gas are becoming ever more efficient and dependable. Gas treatment removes impurities such as water and hydrogen sulphides and Natural Gas Liquids (NGL) can be stripped at this stage for operators can sell on the open market to generate an additional revenue stream.

These technical advances mean that more APG can be converted into usable fuel source and eliminate variations in fuel composition traditionally acting as a barrier to flare-to-power solutions thus making it more economically for operators.

If operators have sufficient power from on-site sources, Aggreko can still convert the flared gas into power which can be sold back to the grid, thereby generating additional revenue from a resource which otherwise would have been wasted.

5) Expanding exploration possibilities

Not only do flare to power solutions deliver considerable cost and net carbon savings, they can also unlock opportunity at remote or difficult-to-reach sites. This effect is most pronounced at fields that lack power supply infrastructure such as a grid connection or natural gas pipeline. Flare to power solutions can allow such sites to operate independent of an external power supply, which means that operators can begin production on a

site that otherwise may have been uneconomical. This was exactly the type of situation that oil and gas producer, BC Operating faced in West Texas. A lack of sufficient electricity supply from the grid meant that 16 of its wells were underdeveloped or untapped, and diesel and other forms of gas were proving uneconomical. Aggreko stepped in to provide the technical expertise to purify the APG on-site and turn it into a useable power source, delivering a ten-to-one return on BC Operating's investment.

Making use of a valuable resource

Using APG in flare-to-power solutions creates three clear benefits: it cuts fuel and operating costs, reduces operators' net emissions, and can unlock opportunities for extracting resources that would have otherwise remained locked in reserves.

These three benefits align perfectly with the industry's priorities as it responds to the global energy transition. Aggreko is proud to have played a role in ensuring that our vital natural resources are utilised in the most efficient way possible, and we look forward to working with more operators to explore how a flare-to-power solutions can help them meet their cost and emissions targets.

[Learn more about our Flare Gas to Power solutions.](#)

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