

# For APR, gas-to-power leads the charge for new gas demand

David Flanagan speaks to APR's Regional Sales Director for Africa Mark Makanda about the company's efforts to diversify downstream provision in the continent

## AFRICA

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**Mark Makanda**  
Africa Sales Director  
APR Energy



PREDICTING the future demand for natural gas in Africa's downstream markets is often challenging. The overwhelming historical prevalence of fuel oil and diesel as energy sources, and the related infrastructure, may have acted as obstacles to evolution of the gas sector in the past. However, demand from industry and the power sector is showing significant signs of life.

Florida-based APR Energy is a pioneer of gas-to-power projects in Africa, recently winning a new project to develop a gas-fired power generation plant in Benin. It is building on a decade of experience in the continent, and has high expectations for the sector.

The new 50-MW project in Benin will be the company's second in Africa using natural gas. In early 2016, it commissioned a three-unit 60-MW gas-fired power plant to support development of a large-scale polyethylene plant being constructed by the Egyptian Ethylene and Derivatives Co. (ETHYDCO) in Alexandria.

The progress of APR's gas operations form part of an evolving trend. Speaking to *News-Base*, Mark Makanda, APR's sales director for Africa said: "Across Africa, and indeed elsewhere in the world, we are seeing growing interest in fast-track projects using natural gas and other clean-burning and readily available fuels such as LPG. This is an interesting development in a market that traditionally has been served by diesel power modules and heavy fuel oil (HFO) engines."

He identified a need for flexibility in the technology it utilises in fulfilling its operations, in particular in allowing for different types of fuel, which may potentially provide financial benefits.

"As the world's largest provider of mobile turbine power, we offer advanced GE 2500+ aeroderivative turbines that can not only run on natural gas, but also can switch seamlessly between natural gas and diesel, or burn abundant, clean-burning LPG," Makanda added.

### Predicting the future

Unpredictable future trends in fuel and gas prices make this a valuable feature as far as APR is concerned and would effectively allow customers to hedge against the risk of volatility of oil and gas prices.

"This is significant because experts are forecasting an increase in the price of diesel fuel and HFO during the next few years, while natural gas

and LPG prices are expected to remain stable," Makanda said.

He added: "Since fuel constitutes about 70% of the cost of power generation, a customer could save millions of dollars a year on fuel by opting for fuel-flexible generating technology. The turbines also offer environmental benefits such as significantly lower Nitrogen Oxide compound (NOX) emissions, 20% less noise and two-thirds less space than a comparable solution using diesel power modules."

APR also recognises that its customers in the African gas-to-power sector, which may have relied on exports of oil and gas, encounter specific challenges related to collecting their own revenues.

Makanda said: "With the downturn in petroleum and commodity markets, paying for power has been a challenge for some African countries with oil and mining-based economies. At the same time, they understand that access to reliable electricity is essential for economic growth. That realisation helps to get the bills paid."

### Supplying demand

Feedstock gas is abundant in many coastal African countries and "even in areas where domestic gas is not available, the abundance and mobility of LNG and LPG should result in more opportunities for gas-fired power generation throughout Africa," Makanda said.

In the case of Benin though, fuel-flexible turbines were attractive "because of their ability to switch to diesel or other fuels in the event of natural gas shortages or pipeline disruptions in the region."

APR sees good prospects for the African downstream gas industry, and Namibia, Mozambique, South Africa and Ghana, "are at various stages in the development of developing LNG import terminals and gas-to-power infrastructure," said Makanda.

He noted that this suggests a promising trend for the sector.

"First, natural gas supplies are abundant and prices are forecast to remain stable for the foreseeable future. And second, natural gas is clean-burning, which makes it increasingly attractive in a world that is pursuing environmentally friendly power solutions," Makanda said.

Such merits are also clearly important in ►►



- ▶▶ generating investment and finance for new downstream energy projects in Africa.

But, also of critical importance to the demand for gas in the downstream sector lies in the underlying and potential trading infrastructure, an area in which Africa has often been seen as in need of improvement.

“Perhaps the greatest opportunity related to these gas-to-power programmes is cross-border

power ... Using gas-to-power to create regional generation hubs would be a win-win proposition in places like the Southern African Power Pool and West African Power Pool. The host country would increase its power supply,” said Makanda.

This would generate export revenues and provide electricity for importing countries without the need to invest to build their own power plants. ❖