

Oman tackles gas demand as shortage looms

Oman is pioneering new energy efficiency programmes, which could see demand for gas fall in the power sector and in gas-intensive enhanced oil recovery. Middle East Correspondent **James Gavin** reports

OMAN'S drive to shore up its gas supply is being matched with an ambitious programme to curb domestic demand. According to official estimates, the country's gas consumption stood at 39.1 million cubic metres per day (MMcm/d) in 2013 – 46% of Oman's production that year.

In its expected demand outlook, the Oman Power & Water Company forecasts gas consumption in the power sector to rise by 7-8% per year until 2020, with high-demand scenarios predicting a rise as steep as 8-10% per year.

However, the surge in demand is not just coming from power generation or downstream industries. Oman's aggressive oil exploration programme – focused on a series of enhanced oil recovery (EOR) schemes – has added pressure. Officials put the rate of gas injection into oilfields at 9.05 MMcm/d in 2013 – nearly 5% higher than in 2012. This is expected to increase significantly as the share of production from EOR projects rises from 18% to 30% by 2020.

Although attempts to reduce gas consumption are having an effect, analysts say Oman is struggling to make a dent in aggregate demand because the injection schemes consume large amounts of gas. Consequently, the country is pioneering alternative, less gas-intensive EOR solutions.

"Oman is a leader in the use of alternative

EOR systems such as polymer flooding, solar EOR and nitrogen injection, and these have the benefit of not relying upon scarce natural gas," said Justin Dargin, a Middle East energy expert at the University of Oxford.

This will happen in tandem with other attempts to reduce industrial demand – an area where Oman has been bolder than most Middle Eastern gas producers.

Price rise for industry

In April 2012, the government increased gas prices for selected industrial users. Average prices for gas supplied to the Oman India Fertiliser Company in Sur were raised to \$3/MMBtu on a sliding scale, with increases of \$0.5/MMBtu every year.

In the Persian Gulf, this represents a potentially revolutionary move, given the region's political climate. Analysts have previously assumed any price increases would only cause public discontent.

In Oman, however, things are different. "Conventional wisdom says it is not a good idea to bring in price increases during a time of political unrest, but Omanis on the whole did not protest the price increases for industrial users. Indeed, many were arguing for it, as they saw foreign users were obtaining the benefit of low gas prices rather than locals," said Dargin.

According to Dargin, Oman has taken the

initiative by instituting price increases, with a price escalator tied to the inflation rate in the United States. "This has worked in terms of addressing gas consumption, and they have also put forward an energy efficiency programme in the power sector which has made inroads by introducing new technology to produce power more efficiently," he said.

Gas demand has been reduced in the power sector by around 6% – a good result, Dargin said. However, it is far from enough to counter Oman's increase in aggregate gas consumption, which some analysts suggest may be as high as 10-15% this year.

The persistent rise in aggregate demand means much will hinge on increasing the availability of imported gas – potentially from Iran – as well BP's \$20 billion Khazzan tight gas development.

According to Paul Gamble, director of MENA sovereigns at Fitch Ratings, the situation will remain tight until Khazzan starts producing in 2017. "They are obviously constrained because gas is exported on long-term contracts as LNG. But it's manageable, as they know that more gas is coming onstream," he said.

Unlike other Gulf states, Oman does not have extensive oil production to fall back on. That means there is a greater incentive to maximise its reserve potential, in which a growing proportion of its gas will be tapped unconventionally, and where lifting costs could go beyond \$8/MMBtu.

The expectation is that LNG exports will stop when the current contracts end in 2024, and priority will shift to other projects.

For the next three years, power generation will be given priority over downstream industries. After 2017, the focus will shift, with the anticipated Khazzan uplift allowing growth in the aluminium, petrochemical and manufacturing sectors.

With reduced demand, increased imports and more conventional gas in the pipeline, Muscat believes it can escape from its constrained condition – even if it cannot hold onto its status as an LNG exporter for much longer. ■

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A Shell gas storage tank in Oman, where the company employs enhanced oil recovery techniques. (Shell)