MENA: LNG’s top growth target

The MENA region is leading global LNG demand growth in 2016 – a trend that will continue as domestic gas output falls short of surging regional demand for power and industry. Egypt and Jordan received their first LNG shipments in 2015; Kuwait, the Gulf’s first LNG importer, and Bahrain are looking to construct permanent import terminals; and Abu Dhabi has opted to import LNG via a floating storage and regasification unit (FSRU). Regional LNG importers are seeking to tie up term supply deals, making the most of structural oversupply to lock in favourable pricing and flexibility. It will all make MENA a growing demand-side force in the global LNG sector.

Despite its dominant role in terms of hydrocarbons reserves, MENA will become the world’s second-largest gas-importing region, believes the International Energy Agency. Consumption of natural gas in the Middle East, the agency forecasts, will rise from 480bn cubic metres (bcm) in 2015 to 738bcm in 2040. Yet despite its strong gas reserves base, production has largely failed to keep pace with historical demand growth and nor will it do so in the coming years. Absent also is a large build-out of regional gas pipeline import options.

The potential for LNG to make up some of the balance is therefore strong. Imports by consumer countries in the region in 2015 amounted to just 10.5bcm of LNG, of which 40% arrived from Qatar. But these levels will rise steeply, spurred by the present global supply overhang, which should allow regional buyers to lock in preferential prices and allow them to choose from a wider range of suppliers. Despite this, some MENA countries will take a “wait and see” approach to building capital-intensive permanent LNG-import terminals, wary of a looming tightening in LNG balances and the potential for price inflation in the second half of the next decade. MENA countries will still invest around $10.3bn in LNG-importing facilities over the medium term to cater for growing demand, and will increasingly charter floating storage and regasification units (FSRUs) as a temporary and lower-cost solution.

Global gas outlook

Global gas demand has increased by 700bcm over the past decade, with 70% of this increase coming from Asia Pacific and Middle East countries; and gas is expected to be the only fossil fuel whose share in the global energy mix will grow between now and 2040. Within that market segment, LNG’s share has been rising for the past 10 years, driven by the need to transport gas efficiently over longer distances to a more diverse customer base. Expectations of rising LNG demand from Asian countries have been a key driver for investment in liquefaction capacity.

But despite these bullish projections for long-term demand, the short-term picture is different, characterised by weaker-than-expected consumption growth and rising supplies. Gas prices have been falling for the past three years, turning a sellers’ market into a buyers’ one. This creates an opportunity for MENA importers to profit from low prices at a time when budgets are tightening.

Lower prices have, in part, reflected declining oil prices because of crude-oil indexing in many LNG contracts. But the fall in gas prices has also been an outcome of supply and demand fundamentals, which shifted in recent years amid a sharp rise in upstream liquefaction capacity and a weakening of Asian gas-demand growth rates. In particular, the advent of shale gas in the US – which now supports a growing liquefaction sector in the Lower 48 – and weak demand in key hubs such as Europe, South Korea and Japan, the world’s largest LNG consumer, have combined to push prices lower. LNG prices in Japan were a little over $15/mmBtu in 2012 but dropped to $5.20/mmBtu as recently as 1Q2016. Regional prices can also be expected to converge, reducing regional spreads to within $0.60/mmBtu.

Global natural gas benchmarks 2012-16 ($/mmBtu)

Thanks to investments sanctioned when prices – and forecasts for demand growth – were higher, significant LNG supply additions will come from Australia and the US in the coming years. Australia will overtake Qatar as the world’s largest LNG producer by 2018, helping lift global capacity by a third compared with 2013 levels.

To regain supply-demand balance in the medium term, the LNG market is counting on strong demand growth in Asia and Latin America – but also from the Middle East, despite competition from renewables and nuclear power. The current squeeze on budgets and significant cuts in energy investments suggests that the market will tighten, but this will not be visible before the first half of the next decade.

MENA gas demand

Demand for gas has grown more quickly than for either oil or electricity over the past three decades, for several reasons. First, gas has been prioritised in power generation, which has itself
risen strongly to meet the needs of a growing population whose per capita income levels have also continued to rise. MENA countries have encouraged gas-intensive industrialisation, too, partly to capture value from low energy prices and, in the case of oil-producing countries, to help diversify their economies. Indeed, petrochemicals and energy-intensive industries have been beneficiaries of policies designed to increase the use of gas.

The MENA region’s reputation as a supplier of global energy obscures a booming domestic supply crunch for natural gas, which will be mostly met by LNG imports. By the end of 2017, MENA countries will account for 6.5% of global LNG demand—a sharp rise from about 1% in 2013. The current market conditions—an abundance of cheap supply—will also encourage MENA countries to think more strategically about gas’s role in their energy mix.

**Qatar aside, GCC is short of gas**

While the GCC’s per capita gas demand ranks among the highest in the world, domestic production has mostly failed to keep pace. Some GCC countries have initiated energy-pricing reforms, but the short-term impact on demand is not expected to be significant, at least at current price levels. This means the onus is on supply-side solutions, notably the securing of LNG imports for the short to medium term.

Kuwait is a case in point. Domestic production has not kept pace with the rise in gas consumption in the country, a situation exacerbated by the relatively unattractive terms offered to IOCs for development of sour gas and high-cost non-associated gas reserves. So Kuwait was the GCC’s first LNG importer and is committed to building permanent LNG-import infrastructure to meet its needs.

In 2014, KNPC signed a five-year contract with Golar LNG to charter an FSRU with an import capacity of 7.9bcm a year (bcma). Kuwaiti imports averaged 4.1bcm in 2015 and will exceed those levels this year: first-half 2016 was up 26% year-on-year. In 2015, KPC signed four-year contracts with BP and Shell to purchase 1.36bcm of LNG from each for 2016 and another four-year contract with Qatargas for 0.68bcma. Kuwait also plans to build a permanent LNG-import terminal in Mina Al-Ahmadi. The $3.3bn terminal will have a processing capacity of 15bcma with the option of expansion to 30bcma.

The UAE is in a slightly different position. It has relatively large reserves of natural gas, but relies on imports to meet peak summer demand. Despite attempts to incorporate renewables in the energy mix and Dubai’s commitment to reduce the share of gas in power generation to 70% by 2030, gas demand across the UAE is still expected to rise. Falling oil prices have hindered the prospects for domestic gas development too. Shell, for example, announced its withdrawal from Abu Dhabi’s landmark Bab sour-gas project in January.

Dubai began importing LNG in 2014. Imports totalled 3.1bcm in 2015 and are expected to reach 4bcm in 2016. Emirates LNG has put on hold plans to install a 12.3bcma LNG-regasification-and-storage facility in Fujairah, instead opting to boost imports by chartering an FSRU in Ruwais, which should come online later this year. This option utilises the current cheaper prices and offers a flexible solution to meet power shortfalls, until the UAE’s four nuclear reactors are completed in the early 2020s.

Bahrain produced 15.3bcm of gas in 2015, a third of which was used for domestic power generation as electricity demand almost reached the country’s 4GW of installed generation capacity. But government plans to expand generation by 1.5GW and a proposal from aluminium producer Alba to build a 1.35GW plant by 2019 will require an additional 3.3bcma of supply. Bahrain’s National Oil and Gas Company has already signed a $653m deal with Teekay LNG, Samsung C&T and Gulf Investment Corp for the development of an LNG-import terminal, to be commissioned in 2018. The terminal will have a capacity of 4.1bcma with an option to double this to 8.2bcma.

Saudi Arabia has the third-largest gas reserves in the Middle East, and all production is committed to power generation and industry. The kingdom announced energy-pricing reforms in early 2016 and has indicated it is open to LNG imports; part of an effort to displace oil used in electricity generation and raise the share of gas in the generation mix from 50% to 70% by 2030.

**MENA regasification projects**

<table>
<thead>
<tr>
<th>Country</th>
<th>Project</th>
<th>Capacity (bcma)</th>
<th>Year commenced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dubai</td>
<td>Jebel Ali LNG</td>
<td>7.0</td>
<td>2010</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Mina Al-Ahmadi</td>
<td>7.9</td>
<td>2014</td>
</tr>
<tr>
<td>Egypt</td>
<td>Ain Suhna 1 (FSRU)</td>
<td>5.7</td>
<td>2015</td>
</tr>
<tr>
<td>Egypt</td>
<td>Ain Suhna 2 (FSRU)</td>
<td>7.7</td>
<td>2015</td>
</tr>
<tr>
<td>Jordan</td>
<td>Aqaba (FSRU)</td>
<td>7.5</td>
<td>2015</td>
</tr>
<tr>
<td>Dubai</td>
<td>Jebel Ali LNG expansion</td>
<td>3.2</td>
<td>2015</td>
</tr>
</tbody>
</table>

Source: APICORP Research, MEES, company websites

**North Africa: new LNG importers**

Decades of low gas prices in Egypt yielded rapid demand growth. Yet domestic output stagnated and political unrest after 2011 hit investor confidence. Both Egypt’s LNG-export projects, at Idku and Damietta, ran dry of feedstock and the country began importing gas in 2013. It chartered its first FSRU from Norway’s Hoegh and a second from BW Group in 2015. These imports are rising fast: in the first quarter of 2016 they reached 1.67bcm, higher than the summer peak average in 2015.

The discovery of the giant 800bcm Al-Zohr gasfield last year and plans to fast-track its development have given hope that LNG imports can be contained. But even if production from new finds reaches full capacity on time, domestic gas demand is still expected to outstrip supply by 2bcm by 2021. Egypt has already
launched a tender to lease a third FSRU with a capacity of 7.7bcma, which could take total FSRU capacity to 21bcma. The Egyptian Natural Gas Holding Company has already signed contracts with suppliers such as Gazprom, Trafalgu and Sonatrach to import up to 15bcma by 2020.

<table>
<thead>
<tr>
<th>Country</th>
<th>Seller</th>
<th>Capacity (bcm)</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>EGY, Gas Natural, Noble, PetroChina, Shell, Trafalgu, Vitol</td>
<td>4.5</td>
<td>2015-16</td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>Noble</td>
<td>2</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>Trafalgu</td>
<td>4</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>Kuwait</td>
<td></td>
<td>1</td>
<td>2015</td>
<td></td>
</tr>
<tr>
<td>Jordan</td>
<td>SOF</td>
<td>7.8</td>
<td>2016-19</td>
<td></td>
</tr>
<tr>
<td>MOROCCO</td>
<td>DGA</td>
<td>12</td>
<td>2016-17</td>
<td></td>
</tr>
</tbody>
</table>

Morocco produces just 0.06bcma, and recent exploration efforts have been disappointing, yielding no significant discoveries from the 10 wells drilled since 2013. But the kingdom has been active in reforming its energy sector and in 2015 phased out all energy subsidies apart from those for LPG. In total, energy subsidies now account for 2% of GDP compared with 7% in 2012. Morocco currently imports 0.6bcma of pipeline gas from Algeria to feed its power plants but the construction of a 2.4GW combined-cycle plant in Rabat will require imports of 3.5bcma of LNG. Moroccan utility ONEE has issued a tender for the construction of a regasification terminal as part of its LNG-to-power project. It has also issued tenders for the import of 2.7bcma in 2020 rising to 5bcma by 2023. Morocco’s reliance on renewables in the power sector makes its future LNG demand difficult to forecast and ONEE plans to purchase 20% of its requirements on the spot market.

**Jordan: LNG importer with options**

Jordan once relied on gas supplies from Egypt and Iraq for power generation. Disruptions to Iraqi supplies after 2003 and the collapse of Egypt as a gas exporter prompted the kingdom to switch some power generation to diesel and fuel oil. At present, gas still accounts for 80% of Jordan’s power-generation mix and planned LNG imports should over time displace liquids. In May 2015, Jordan began importing LNG after chartering the 7.5bcma Golar Eskimo FSRU for 10 years. But the prospect of Israeli gas pipeline imports from 2018 means Jordan will not expand this LNG-import capacity. Noble Energy, which produces gas in Israel, has announced a $500m contract to supply 2.2bcma spread over 15 years. Delek and Noble are also considering a longer-term export agreement totalling 45bcma over a similar duration, roughly equivalent to those it received from Egypt.

LNG remains Lebanon’s only gas-import option after Egyptian gas imports via the Arab Gas Pipeline ended in 2010. In 2013, the government issued a tender to charter a 7.7bcma FSRU with imports expected in the region of 1.6bcma in 2016 rising to 4.8bcma by 2022. This should replace the existing fuel oil used in power generation and save the country more than $1bn per year. But the lack of progress this year is likely to push plans back towards the end of the decade.

**Iraq: missed opportunity**

In 2015, Iraq produced 23bcm of natural gas but flared 70% of it – volumes that would have been sufficient to power its 9.3GW of installed power-generation capacity. Lack of gas-recovery equipment at major oil fields and delayed plans for gas gathering and processing by Basra Gas Company have held up plans to reduce flaring and force companies to burn liquids instead. With 7GW of gas-fired generation capacity expected to come on line over the next five years, demand for gas is likely to rise steeply over and above existing shortfalls. Permanent import facilities are perhaps a stretch in a country where the government is struggling to sustain public spending, but Iraq could take advantage of currently low spot prices and follow other neighbouring countries by chartering an FSRU to meet current demand shortfalls.

**Opportunities and challenges**

While low LNG prices present opportunities, there are also challenges. Credit-worthiness continues to fall within the region, raising the cost of finance. Lower domestic energy prices reduce the attractiveness of investments in long-term LNG import infrastructure. For countries such as Egypt, LNG suppliers are wary of agreeing long-term contracts given the state’s poor payment history. Egypt still owes more than $3bn to companies involved in its gas sector, despite repaying some arrears. Capital constraints and uncertainties in the LNG market mean that many are opting for FSRUs as a temporary option, taking advantage of low prices before considering more expensive long-term options. But, longer term, confronting the gas challenge requires a pragmatic approach to domestic prices for gas (and power), allowing them to rise sufficiently to incentivise the development of the region’s considerable gas resources. Despite its large reserves, MENA has not deployed sufficient investment to bring these reserves into production, while prospects for regional gas pipeline trade remain limited.

MENA countries will seek to reinforce gas security by prioritising gas for the domestic market and by creating import infrastructure and capacity. Low spot LNG prices combined with FSRUs offer a welcome quick fix. A swathe of import tenders from Egypt and Jordan in the past two years is a positive step towards energy security. Diversified imports in Dubai and Kuwait show that under current market conditions MENA importers can meet seasonal demand increases. Favourable market conditions should incentivise new MENA importers to do more to ensure they do not miss the opportunity to install import infrastructure and sign cheap and flexible LNG deals.