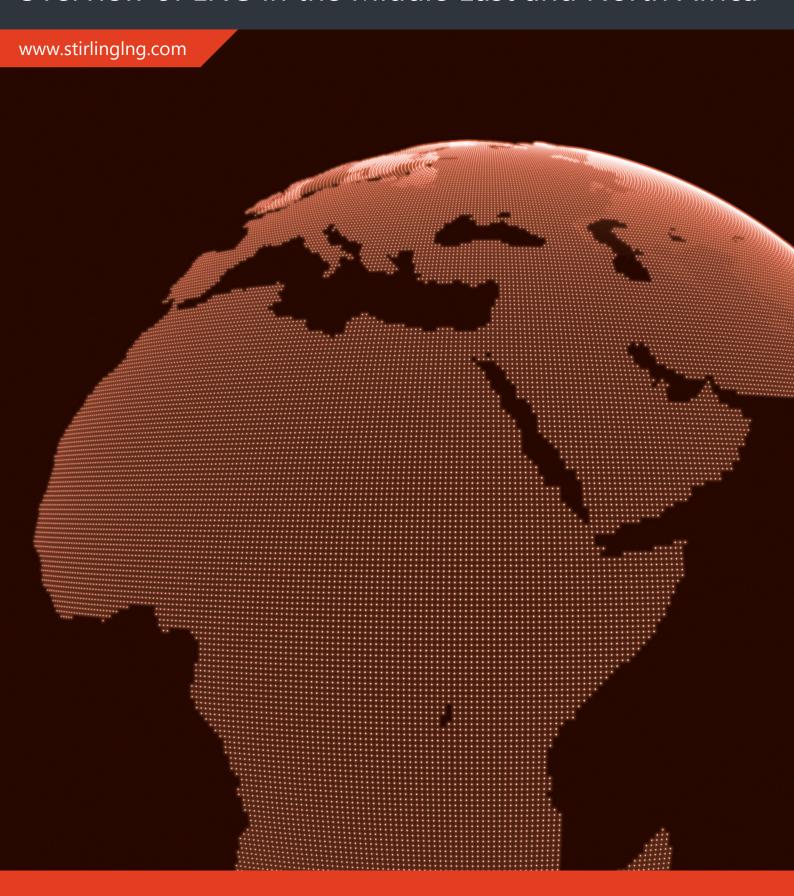


Middle East and North Africa LNG

Overview of LNG in the Middle East and North Africa



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MIDDLE EAST AND NORTH AFRICA MARKET INSIGHT

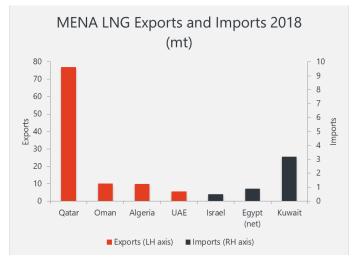
The purpose of this report is to illustrate the state of the LNG market in the Middle East and North Africa (MENA) region, identifying the key drivers of supply and demand. Stirling LNG is committed to providing high-level insights into the LNG market in key regions and countries and our analysts are constantly monitoring the evolution of the medium to long-term market, providing analysis and evaluating investment risks and opportunities in the region.

We advise on developing a portfolio strategy for the purchase of LNG contracts and identify the risks and opportunities on the purchase of such contracts by region.

INTRODUCTION

The MENA region has the world's largest proven natural gas reserves. At the end of 2018, the Middle East plus Algeria, Egypt and Libya had proven reserves of 83.3 trillion cubic meters (tcm), equivalent to 42% of the global total. At 24.7 tcm, the tiny nation of Qatar has the third largest gas reserves of all countries in the world, beaten only by the Russian Federation and Iran. Consequently, Qatar has led the way in developing a large LNG export industry and, despite significant developments in other parts of the globe, it is still the world's largest exporter of LNG. In 2018, exports from the Middle East, Algeria and Egypt totalled 104 million tonnes (mt), 33% of the global traded market in that year.

Although overwhelmingly an export region at present, MENA has seen pockets of import demand emerge, most notably in Kuwait which is in the process of greatly expanding its import capacity. And political and civil unrest in Egypt has resulted in the country being a net importer of LNG for a few years although that trend now looks set to reverse.



QATAR

Qatar is still the largest LNG exporter in the world. In 2018, Qatari LNG exports amounted to 77 mt, corresponding to 24.3% of the global market, although this market share has been declining due to production growth in the rest of the world, notably in Australia and the US. Qatar benefits from its location as geographically equidistant from the key importing markets of Europe and Asia, allowing it to swing supplies depending on hub price strength. This dynamic is increasing as contracts become more flexible. In 2018, Qatar sent 16.6 mt of LNG to Europe (22% of its total exports) versus 56.8 mt (74%) to Asia.

After lifting a moratorium preventing further production expansion in the North Field, Qatar plans to significantly expand its liquefaction capacity over the coming few years. The country's nominal capacity is expected to increase from 77 million tonnes per annum (mtpa) currently to around 110 mtpa by 2024-2025. These expansion plans are strengthened by Qatar's low upstream costs of conventional gas production and its demonstrated ability to run its existing fleet of liquefaction plants at close to 100% utilization of nameplate capacity. Stirling LNG expects that further developments of Qatar's North Field will contribute to meeting the rising demand for LNG in the Asia Pacific region.

OMAN

In 2018, Oman exported 10 mt of LNG, making it the second largest supplier in the MENA region. Almost all Omani exports are sent to Asia with South Korea and Japan receiving 74% of total 2018 volumes. In the same year, a small amount of exports (0.5 mt, 5%) stayed in the Middle East, mainly imported by Kuwait. With a total nameplate liquefaction capacity of 10.8 mtpa, Oman, like Qatar, is efficient at running its facilities at close to 100% utilization. However, Oman has begun a project to debottleneck its production process which, when completed in 2021, is targeted to increase exports to 11.5 mtpa.

UNITED ARAB EMIRATES

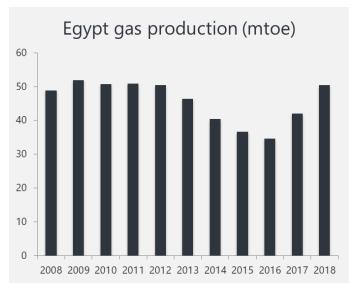
The UAE exported 5.4 mt of LNG in 2018, making it the fourth largest supplier in the MENA region. All of the country's exports in that year were sent to Asia with Japan taking, by far, the largest share at 5 mt (93%). With nameplate liquefaction capacity of 5.8 mtpa, the UAE has a small amount of additional headroom before reaching utilization constraints. Stirling LNG believes that close to full capacity exports could be reached in the coming 3-4 years assuming a proposed refurbishment program is completed successfully and the country fully exploits recent new gas discoveries.

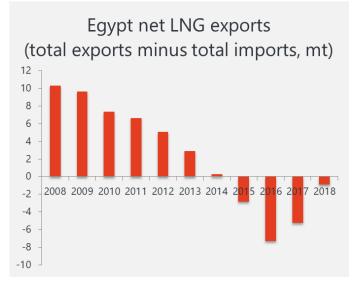
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The UAE has also historically imported modest quantities of LNG which, in recent years, peaked in 2016 at 3.1 mt. However, in 2018, imports declined to just 0.7 mt as domestic gas production strengthened from 51.9 million tonnes of oil equivalent (mtoe) in 2016 to 55.6 mtoe in 2018.

EGYPT

In 2018, Egypt exported 1.5 mt of LNG, a YOY increase of 0.6 mt. However, in the same year, it also imported 2.4 mt of LNG meaning that it was still a net importer, albeit at a level lower than in the preceding two years. In recent years, Egypt's gas production and LNG export capability has suffered from the political instability impacting the country and, as recently as 2015, it exported no LNG at all. Nevertheless, the resumption in operations at the Idku LNG plant contributed to the recent increase in Egypt's exports. Improved domestic gas production activity contributed to meeting domestic gas demand and has reduced the need for LNG imports into the country, which declined from a recent peak of 7.9 mt in 2016 to 2.3 mt in 2018.





Stirling LNG foresees a robust increase in Egyptian LNG exports in the short to medium term due to the resumption of exports from the Damietta LNG plant and as the supergiant Zohr gas field ramps up to full production.

ALGERIA

Algeria exported 9.9 mt of LNG in 2018 making it the MENA region's third largest exporter in that year. However, the recent trend in Algerian LNG exports has been downwards from a recent high of 12.8 mt in 2014 as the country has prioritised pipeline exports of natural gas to Europe at the expense of liquefying it for LNG export. Turkey was Algeria's most significant importer of LNG in 2018, receiving 3.5 mt, and was closely followed by France which received 2.9 mt. At just over 25 mtpa, Algeria's total liquefaction capacity is easily able to cope with current export levels and no new facilities are currently under construction or planned. Stirling LNG expects Algeria's LNG exports to remain stable in the foreseeable future.

ISRAEL

Historically, Israel has imported small amounts of LNG through its Hadera floating LNG import terminal. However, the country has the potential to become a large LNG exporter in the region. The ongoing development of the Leviathan gas field, which has estimated reserves totalling 600 billion cubic meters (bcm), could satisfy domestic demand while creating a surplus for LNG export. Exxon Mobil is currently in discussions with the Israeli government over the development of an FLNG export facility. Stirling LNG expects Israel to become an LNG exporter by 2025.

KUWAIT

Kuwait is an importer of LNG and, in 2018, took delivery of 3.2 mt of the fuel. This was down 10% on the previous two years but is still high relative to pre-2015 levels. The country has diversified sources of LNG supply with its single biggest supplier in 2018, Qatar, accounting for only 1.2 mt (38%) and other supplies coming from countries as diverse as Angola, Nigeria, Oman and the US. Kuwait currently imports LNG through its sole 5.8 mtpa Mina Al-Ahmadi floating terminal but it is in the process of constructing a giant onshore import terminal at Al Zour which, when completed, will add 11.3 mtpa of import capacity taking its total import capability to just over 17 mtpa. If construction runs to schedule, commissioning of Al Zour should begin in 2021.

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CONCLUSION

Despite significant LNG market developments in other parts of the world, notably the US and Australia, the MENA region remains a key player in the global export market. At least for time being, Qatar retains its position as the single largest LNG supply country in the world and benefits from its geographic location, equidistant from the key demand centres of Europe and Asia. But new players are emerging in the region and we expect Egypt and Israel to see significant supply growth in the coming years, supported by large upstream production developments.

In addition to MENA, we also provide detailed LNG analysis in other key regions including Asia Pacific, Europe, Sub-Saharan Africa and the Americas.

In addition to advising on the portfolio construction for the purchase of medium to long term LNG contracts for off-takers, the firm also advises on project finance on oil and gas infrastructure projects. For further information, please visit www.stirlinglng.com.

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ABOUT STIRLING INFRASTRUCTURE

Stirling LNG is a division of Stirling Infrastructure Partners. Stirling LNG performs three key functions:

Buying and selling LNG on behalf of off-takers and LNG suppliers on short, medium and long-term contracts. The firm provides purchase and sales solutions to finance these contracts.

Arranging capital for gas infrastructure and advising on the acquisition and disposal of upstream, midstream, and downstream oil and gas assets.

Arranging capital for major oil & gas companies and project sponsors. The firm specialises in financing the development of new and existing gas power plants and gas infrastructure. This includes both floating and on-land assets.

DISCLAIMER

This document has been prepared for information purposes only and does not represent advice. Stirling LNG can provide advice on a case-by-case basis depending on a specific project and requirements of our client.

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