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Consumption

In 2018, global gas consumption grew by 5.3 per cent, the highest rate since 2010 and more than double the 10-year average growth rate of 2.2 per cent. Consumption in the United States rose strongly (+10.5 per cent) as well as in Iran (+7.4 per cent), Iraq (+33.9 per cent), Russia (+5.4 per cent) and China (+17.7 per cent). This was offset somewhat by large falls in consumption in Ecuador (-14.1 per cent) and in Turkey (-8.3 per cent). Non-OECD countries (+5.7 per cent) recorded greater growth than OECD countries (+4.9 per cent). Meanwhile, the UK saw a small increase in consumption of 0.1 per cent.

Production of natural gas globally increased in line with consumption by 5.2 per cent. Iraq (+28.4 per cent), Oman (+11.4 per cent), Australia (+15.3 per cent), the United States (+11.5 per cent) and Egypt (+20 per cent) recorded significant increases in production. China also saw sizeable growth (+8.3 per cent). European production fell by 4.8 per cent, in particular due to large falls in Denmark (-15 per cent), Germany (-13.1 per cent) and the Netherlands (-16.3 per cent). Large falls in production were also seen in South America, with decreases in Venezuela (-13.9 per cent), Brazil (-7.4 per cent) and Bolivia (-6.6 per cent).

In 2018, the total global gas trade grew by 4.3 per cent. Only a small fraction of this increase came from inter-regional pipeline trade (+0.4 per cent). Pipeline trade grew significantly to China (+20 per cent) but showed a sharp drop in relation to gas flowing to the Middle East (-54 per cent). Europe saw a small increase in pipeline imports (+ 0.7 per cent) while the United States saw a decline of 4.3 per cent.

Global LNG trade, on the other hand, grew markedly at a rate of 9.4 per cent in 2018, significantly outpacing pipeline trade. Export growth was led by Russia and the US, which combined accounted for over 55 per cent of the increase. China saw a very large annual growth in LNG imports (38.8 per cent), while the UAE saw a more than 60 per cent decline in LNG imports due to the diplomatic dispute with Qatar.

The figures quoted are taken from SNAM 'Global Gas Report 2019' and the 'BP Statistical Review of World Energy 2019'.

LNG

Though 2019 was an exceptional year, showing the second highest year-on-year increase in supply on record – of over 36 mt, as the end of the decade approaches some familiar uncertainties remain. In terms of points of note, LNG commentators find common ground in many areas:

- Gas is no stranger to politics, and LNG appears no different. The industry (or at least for US exporters) has entered

a new phase with the US LNG exports being marketed as ‘molecules of freedom’ or ‘freedom gas’ by the US Department of Energy. This is a response to growing supplies from Russia and continuing trade disagreements with China. It is thought that closer scrutiny of investment in strategic infrastructure by the United States and the imposition of tariffs on US LNG imports to China is going to make FID on the second wave of US export projects more challenging, if not already challenging enough, based on the competition from new projects in Mozambique and Australian project expansions.

- For two key markets, China and India, the projections are still for significant growth in 2020, in China up to an anticipated 14 per cent from an expected 10 per cent actual growth for 2019: not insignificant growth, but down from the levels achieved in 2017–18. This is attributed in part to piped gas from Russia, a slowdown in the switch to gas from coal and challenges with new domestic infrastructure development. For India, there are suggestions of a 10 per cent increase, the result of positive responses to lower LNG prices in 2019. Again, coal represents a challenge to LNG penetration, and, as in China, new domestic infrastructure projects are challenged.
- At the start of 2020, projects aiming for FID by year-end total approximately 150 mtpa (increasing to 166 mtpa if planned Qatari expansions are included). This helps fuel the suggestion the mid-2020s will see a period of oversupply in capacity, notwithstanding lower prices and no shortages in inventories.

The figures and analysis are drawn from Gas Strategies ‘LNG Outlook 2020’ available at www.gasstrategies.com.

US policy

US gas production increased by almost 12 per cent during 2018, driven by shale gas plays in Marcellus, Haynesville and Permian. The majority was used to respond to the surge of domestic demand, which reached a record annual high of 29.95 trillion cubic feet. This expansion represents roughly the same growth as the country achieved over the previous six years. Growing fossil fuel demand and an increased awareness of climate change issues have led to increased public debate on domestic and international energy policy.

Since 1990, more than two-thirds of the oil and gas industry’s contributions to candidates and party committees have gone to the Republican Party. During the year prior the 2016 presidential election, the industry contributed over US\$55 million to Republican candidates, as opposed to around US\$8 million to Democratic runners. This might not seem surprising – historically, the oil and gas industry has sided with Republican fossil fuel policies.

Indeed, the Trump administration has done more for the industry than many of its predecessors. The US government has offered nearly 600,000 square miles of public land for oil and gas leases since President Trump took office – more than any previous administration. In addition, the United States has withdrawn from the 2015 Paris Accord and Obama-era regulations aimed at reducing methane emissions have been watered down. On the other hand, the land royalty rate under the Mineral Leasing Act has increased from 12.5 per cent to 16 per cent.

Looking towards the 2020 presidential elections, a number of Democratic candidates support a total ban on fracking and fossil fuel exports (including frontrunners Warren and Sanders), highlighting the party’s move to the left on these issues over recent years. Previously, the Obama administration had welcomed fracking as a means of providing energy independence and cheaper bills (though it also set standards for hydraulic fracturing on federal land, which President Trump has since repealed).

Further Democratic initiatives include the Green New Deal, supported by most of the Democratic frontrunners, which proposals suggest could be part-funded by higher taxes on fossil fuels. Others include a carbon tax levied on polluters and a pledge to reach net zero carbon emissions by 2050. Bernie Sanders takes the most aggressive line against the fossil fuel industry – in addition to raising taxes and pursuing civil litigation, suggesting criminal prosecution of

greenhouse gas emitters.

This shift to the left on fossil fuel policy has not increased the Democrats' popularity with the oil and gas sector. Large players in the industry have already donated hundreds of thousands of dollars to support the Trump 2020 re-election campaign. A second term for President Trump would likely see continued deregulation and reduced governmental pressure on oil and gas firms to meet environmental targets.

Qatar and OPEC

Qatar chose to withdraw from OPEC on 1 January 2019, stating that it wanted to build on its position as the world's leading LNG exporter. While the additional focus on natural gas makes sense for a country that contributed only 2 per cent to OPEC's total oil output, the decision must also be seen in light of the continued Saudi Arabian-led boycott of Qatar since 2017. 2019 also saw a shift in the cartel's decision-making centre, as Saudi Arabia increasingly coordinated output cuts with non-member Russia. In December 2019, OPEC and its allies agreed to cut oil production from October 2018 levels by 1.7 million barrels per day. The effect of these cuts on oil prices in 2020 may be limited, however, given the expected increase in production from countries such as the United States, Brazil and Norway.

Qatar itself remained the world's largest supplier of LNG at the end of 2019, though a raft of new projects means Australia is likely to take the crown in 2020. Looking ahead, Qatar expects to reclaim the top spot as it expands production in its North Field, taking total LNG production capacity up to 126 million tonnes per year by 2027. New LNG projects in the likes of the United States, Russia, Mozambique, and Canada over the next five years are expected to depress global LNG prices, but Qatar's position as by far the world's lowest cost producer means its exports are likely to remain competitive and profitable. State-owned Qatar Petroleum has already begun attempts to expand its customer base, for example signing a deal in September 2019 with Fluxys to reserve the entire unloading capacity of its Zeebrugge import terminal – around 6.6 million tonnes per year – until 2044.

Gas in a net-zero world

2019 saw an acceleration in the decarbonisation movement globally; the 'Greta' effect, and campaigns led by Extinction Rebellion, among others, have increased the clamour worldwide for the most carbon-intensive industries to make significant and enduring changes to move to a 'net-zero' world, and to transition away from the current fossil fuel economies.

While climate activists appear to expect an overnight change to renewable and carbon-neutral technologies, the energy industry's view is more pragmatic, understanding that in a number of ways the current infrastructure and technology is not yet in place to accommodate such an immediate radical shift. In the short and medium terms, the focus is first to improve and increase the number of renewable projects globally while solving the issues around intermittency and energy storage associated with those technologies, and second to decrease the reliance on coal and oil.

This places natural gas in an interesting position of being part of the fossil fuel economy, but also part of the energy transition. While natural gas is a hydrocarbon, it is cheaper and greener to burn gas than oil, LPG or coal, so simply switching to natural gas where possible would help to achieve the second objective of the industry. But although that might lead one to think this is the 'golden age' of gas, this is likely to last only a few years unless combined with other decarbonisation efforts, such as carbon capture and storage (CCS), or transitioning partly or fully towards a hydrogen economy. While problems abound with both CCS and manufacturing hydrogen in a carbon neutral process, natural gas will play a vital role in the 'net-zero' world. However, the expectation is that at some point in the not-too-distant future (supposedly sometime in the mid-2020s or early 2030s), natural gas will have almost entirely replaced more

carbon-rich fuels, and will then bear the brunt of climate change activists for further decarbonisation.

Although industry leading companies are looking to diversify from fossil fuels and invest in renewable technologies, it is notable that many of these investments are focused on replacing natural gas in transportation and industrial processes rather than in heat and power generation, which is where natural gas's largest carbon footprint lies. Equally as telling is the fact that only around 10 per cent of the world's largest energy firms have publicly committed to net-zero targets. Even though the move to decarbonisation is continuing to gather pace, until the industry's key players publicly commit and move towards net-zero targets, natural gas will continue to play a key role in the global energy mix. The question is for how much longer this approach will be sustainable.

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Your Key Contacts



Adam Brown

Managing Practice
Development Lawyer,
London

D +44 20 7246 7014

M +44 78 8151 8384

adam.brown@dentons.com



David Tennant

Partner, London

D +44 20 7246 7660

M +44 7771 842 832

david.tennant@dentons.com



Ciaran Mcilwham

Associate, London

D +44 20 7320 6036

M +44 7471 953049

ciaran.mcilwham@dentons.com



Mark Cheney

Partner, London

D +44 20 7246 7650

mark.cheney@dentons.com



Laura Mackett

Senior Associate, London

D +44 20 7246 7484

M +44 7557 495455

laura.mackett@dentons.com



Rebecca Owen-Howes

Counsel, London

D +44 20 7246 7523

M +44 7733 307375

rebecca.owen-howes@dentons.com