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LNG Outlook 2020

The business of change

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Updated 6 January 2020 to include the FID taken by Nigeria LNG on Train 7 expansion and debottlenecking on 27 December 2019

Gas Strategies

Gas Strategies is recognised for its informed commercial objectivity regarding the business of gas and LNG. We have seen and advised around the world on the development and liberalisation of markets, the monetisation of resources, and the growth and investment in infrastructure. Our clients are organisations and individuals who trust us to support them to address business challenges and opportunities when the stakes are high.

Gas Strategies brings together an unrivalled combination of analytical capability and real round-the-world experience to serve you with relevant insight on your operations and investments.

We will be pleased to discuss how this capability and experience can be applied to your business in 2020 and the decade beyond.

Pat Breen
CEO
+44 (0)20 7332 9987
Email: p.breen@gasstrategies.com

Kieran Powyer
Manager
+44 (0)20 7332 9949
Email: k.powyer@gasstrategies.com

Tom Field
Senior Consultant
+44 (0)20 7332 9942
Email: t.field@gasstrategies.com

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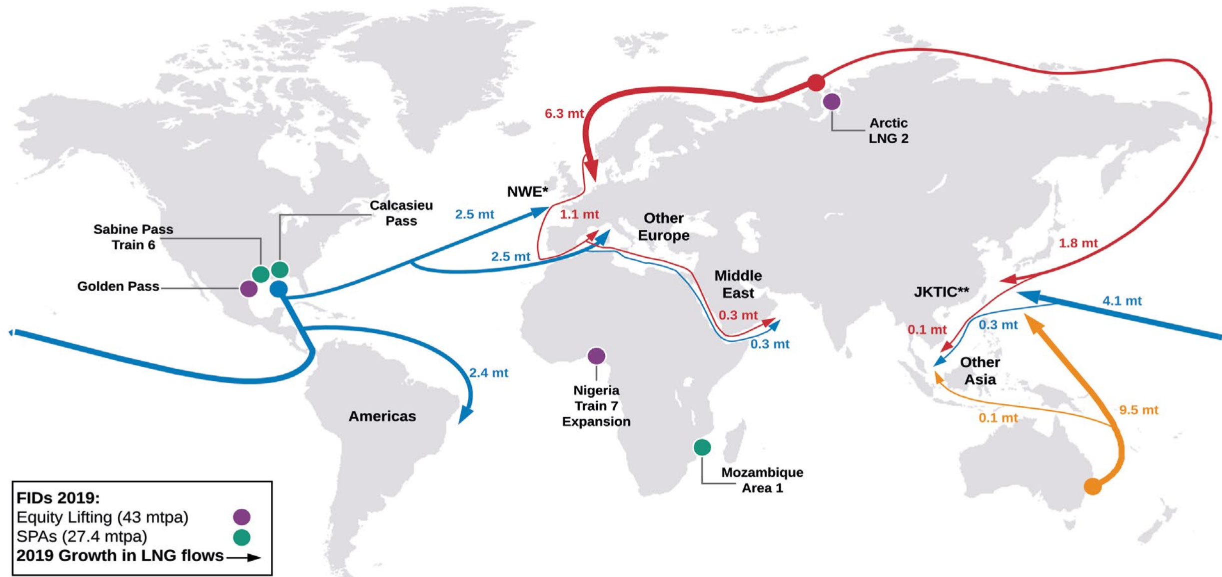
Disrupted end to the decade

By the end of November 2019, global LNG supply had grown by 13% year-on-year, or just over 36 mt, originating mostly from new capacity coming onstream in the US, Australia and Russia. This accumulates to a remarkable growth in supply of almost 35% in the past five years, with 2019 surpassing 2017 as the second highest increase on record.

Analysis of LNG shipping flows in Figure 1 indicates that approximately one quarter of this increase arrived in north-west Europe, including volumes that were re-exported. This was not necessarily the destination many long-term buyers, or project developers, anticipated at sanction. It reflected a well-supplied market, with sellers seeking the region's liquid hubs as a market of last resort.

Figure 1 2019 LNG FIDs and key supply growth flows

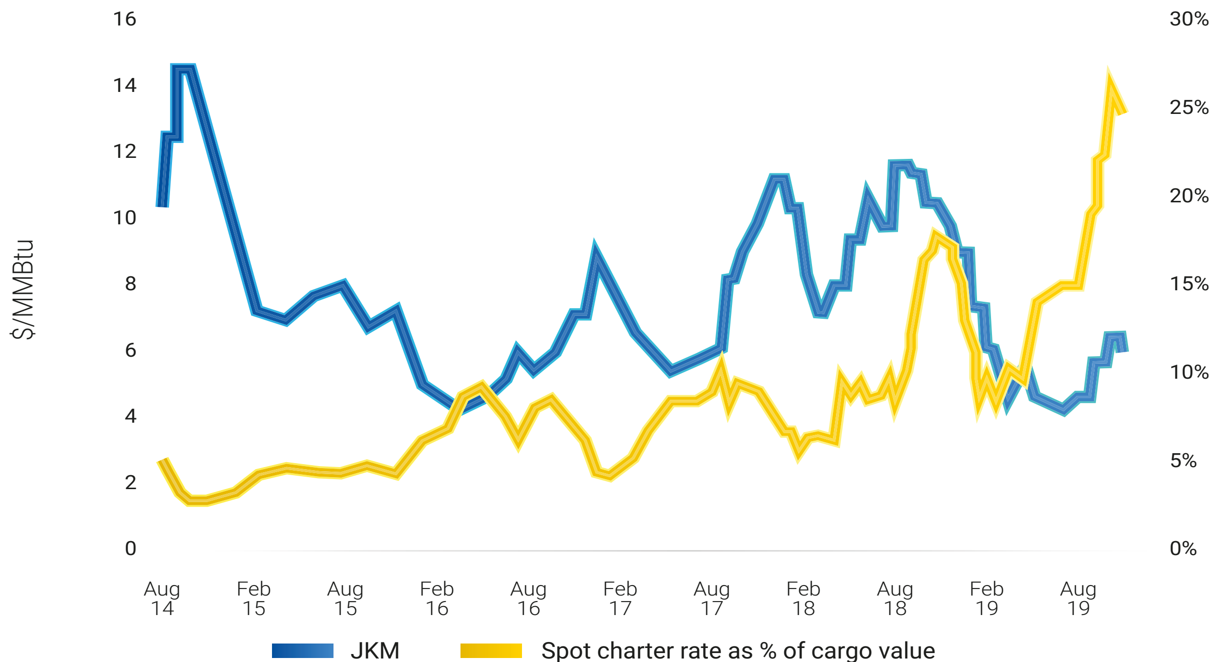


Source: *Thomson Reuters, Gas Strategies analysis*

**north-west Europe, includes re-exports ** Japan, Korea, Taiwan, India and China*

Alongside the financial pain caused to sellers by low prices, another issue shot up the agenda in 2019: shipping. In the past, with high delivered prices – over USD 10/MMBtu in Asia and over USD 8/MMBtu in north-west Europe – shipping charter costs were generally no more than 5% of the delivered cargo value. Investments in shipping optimisation were a lower strategic priority for many LNG players. However, with prices in Asia falling as low as USD 6/MMBtu, charter costs have represented as much as 20% of the overall price (Figure 2). Shipping has moved from being regarded as a means of merely transporting LNG point-to-point to a key driver of value.

Figure 2 LNG spot charter rates vs. Platts JKM prices



Source: *Thomson Reuters, Platts, Gas Strategies analysis*

2019 was also a year when accepted wisdoms in demand growth proved unreliable. Following strong demand growth in 2018, Chinese LNG imports undershot expectations, while the low-price environment failed to get a demand response from India. The kind of spot cargo purchasing that can push prices up was, as a result, more subdued in the Pacific basin.

Additionally, the industry consolidation observed in recent years came into sharper focus in 2019. Low prices and an oversupplied market, combined with a more galvanised decarbonisation agenda, pushed more players to the exit. In October, ConocoPhillips announced the sale of its stake and operatorship of the Darwin LNG plant to Santos, a move that may reflect a recognition within traditional upstream companies of the need to either 'go big or go home' when approaching LNG.

In June, Iberdrola divested its LNG business to Pavilion, a move consistent with a strategic direction at corporate level to transition to a more renewable-energy, customer-focused model.

Despite these apparent dislocations in the industry, the LNG supply push continued unabated, driving further increases in liquefaction capacity for the mid-2020s. A record 70.4 mt of capacity reached final investment decision (FID) – more than double the previous record set in 2011. As shown in Figure 1, new capacity was centred in those regions most expected to power potential expansions, namely the US, Mozambique and Russia. More than 55% of liquefaction capacity taking FID in 2019 represents lifting by the equity backers into their portfolios.

Gas Strategies recognises 2019 as being a tipping point in the evolution of the LNG industry. The dislocations in market behaviours during 2019, combined with the change in the contracting basis for supply from new project FIDs, brings LNG into an uncharted age of uncertainty. The stand-out change in 2019 has been the liberalisation of LNG as a commodity, brought about by the growing volume of US LNG into the market.

If 2019 has been a disrupted end to a decade of extraordinary growth, then the outlook for 2020 offers limited prospect of a return to old stabilities. Market uncertainties, increased competitive pressures and a need for great agility look set to be the new normal and success will be achieved very differently to the past. Strong objectivity will need to be brought to many organisations' assessment of capabilities and ambitions if they are to tackle these changes effectively.

LNG and trade war dynamics

Gas and LNG are no strangers to politics, but this relationship has entered a new phase with the politicisation of LNG exports from the US – ‘freedom gas’ in a Trumpian world – in response to growing Russian supply into Europe, and the US-China trade war.

Tighter scrutiny over investments in strategic infrastructure by the Committee on Foreign Investment in the United States (CFIUS) has added to the imposition of tariffs on US LNG imports by China. This will continue to suffocate LNG-linked trade between the two countries in 2020, while making the job of securing long-term customers for second wave US projects that much more difficult.

Beyond US-Chinese LNG trade, there appears to be growing optimism that global trade is stabilising. However, while this has lifted equity markets, there has not been a marked improvement in the outlook for global GDP in 2020. Evidence of a broad-based recovery is still lacking. It remains possible that economic activity will be subdued in 2020. Depending on the out-turn on trade and other economic, financial and monetary interconnections, demand growth for LNG in the key markets of China and India could remain subdued in 2020, despite low prices.

Figure 3 Chinese LNG Demand: 2016-2020

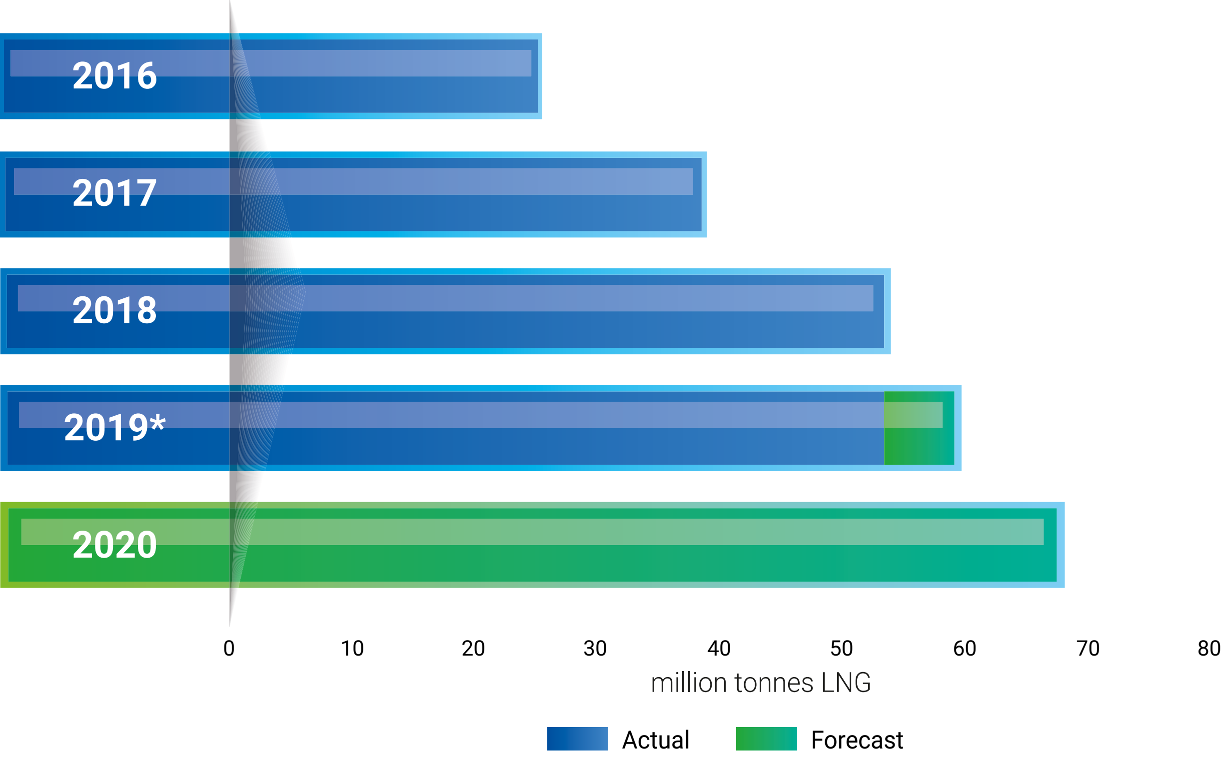
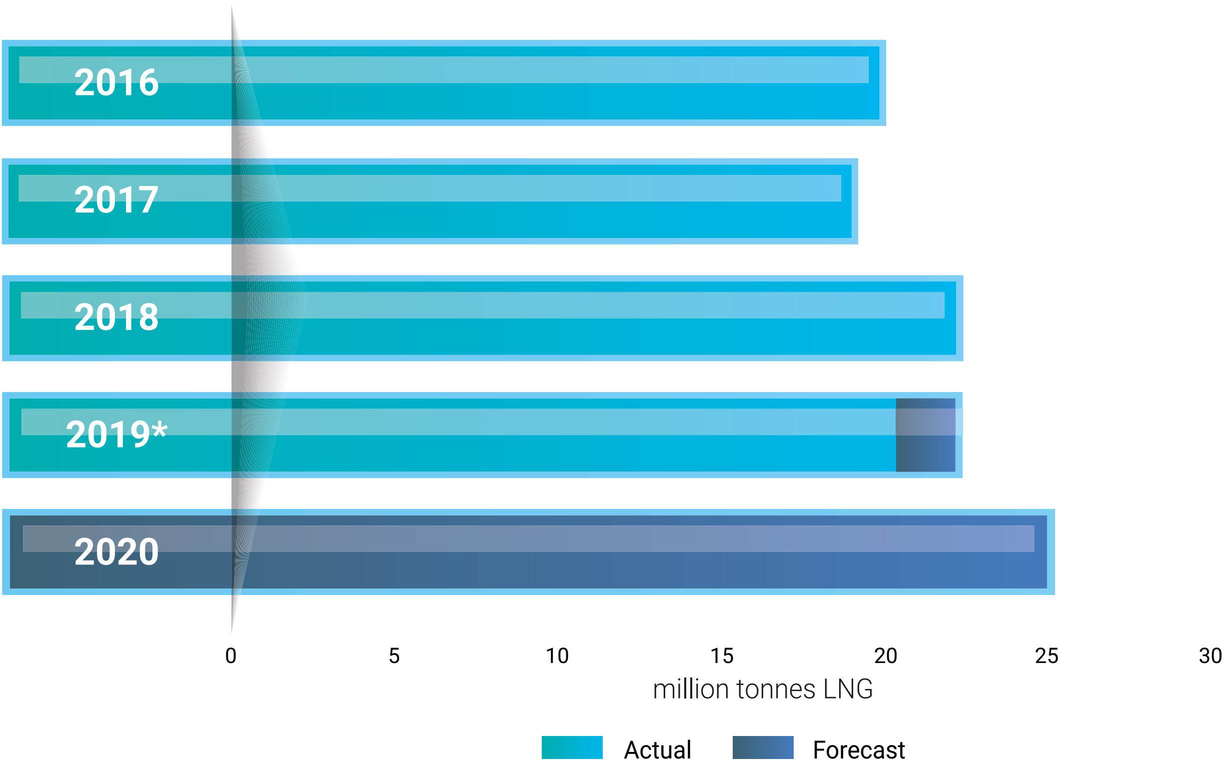


Figure 4 Indian LNG Demand: 2016-2020



**actual demand for 2019 as at 30 November 2019*

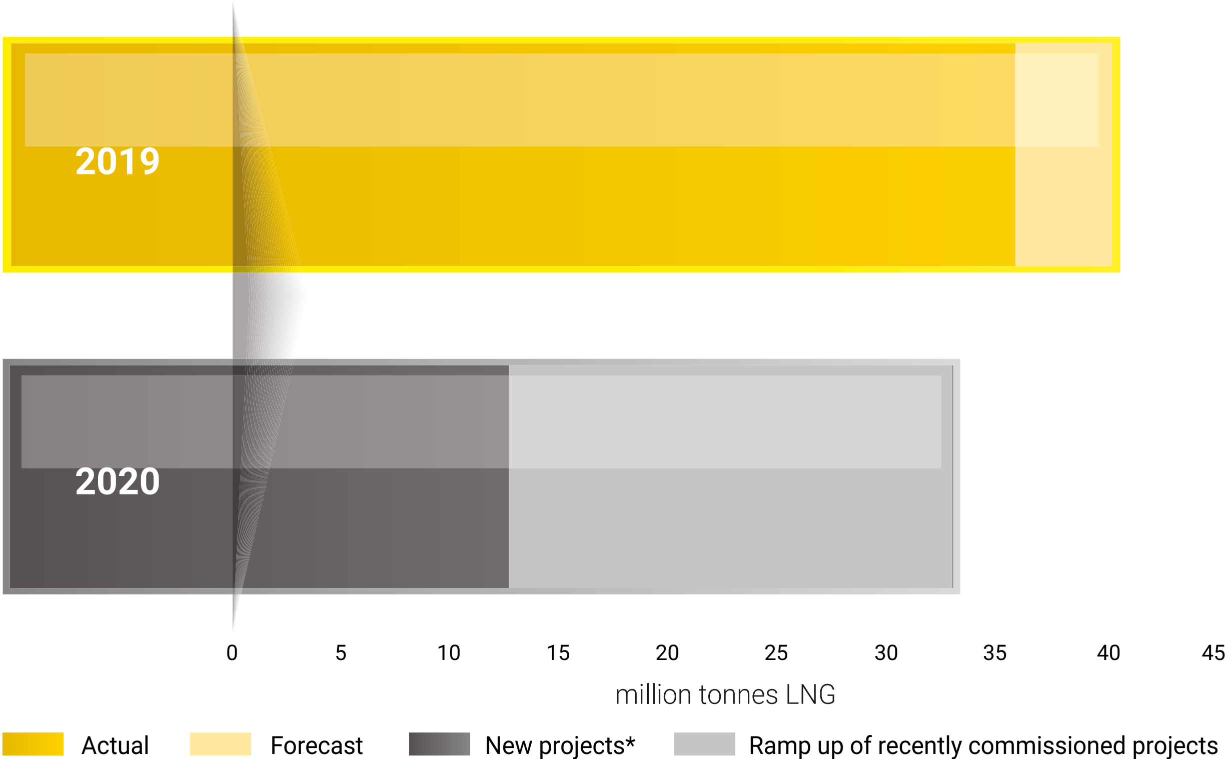
Souces: *GIIGNL, Thomson Reuters, Gas Strategies analysis*

For China, this slower expansion has roots in forecast lower GDP growth as well as issues such a slowdown in coal-to-gas switching, infrastructure constraints and piped Russian gas coming to the country. This is resulting in forecasted growth of around 10% in 2019, with a forecast of 14% growth in 2020 – still significant, but a step down from 2017-2018.

Meanwhile, Indian LNG demand has surprised by not responding positively to lower prices during 2019. Competition from coal for latent power generation demand remained fierce, compounded by lower economic expansion and domestic infrastructure constraints. For 2020 we see an uptick in LNG demand growth to 10%, leading to an estimated total consumption of 25 mtpa.

In terms of global production, in 2020 we expect continued growth of LNG supply of around 10% (down marginally in absolute and relative terms on 2019) – driven by a continued ramp-up of projects which have come online over 2018-2019, and new projects which are expected to begin commissioning and ramping up next year.

Figure 5 LNG supply growth: 2019 and 2020



**assumes 50% of nameplate capacity in commissioning year*

***Source:** Gas Strategies*

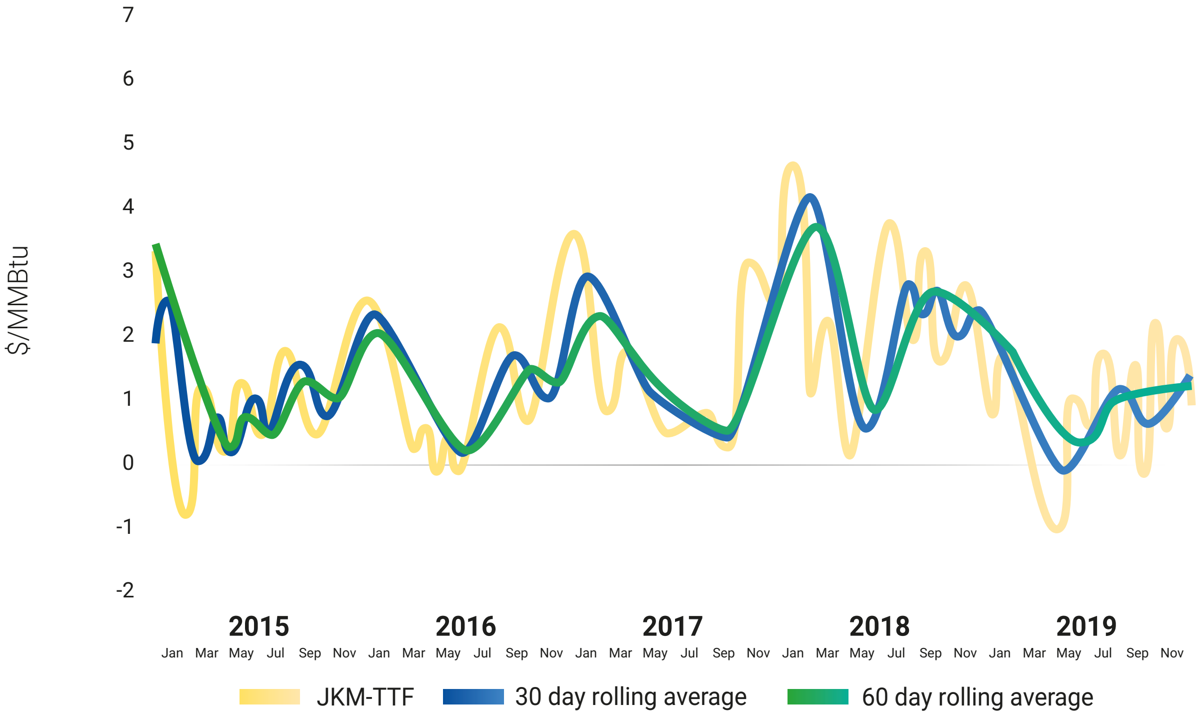
Wide pricing spreads: beginning of the end?

Unless 2020 sees a sharp increase in Asian LNG buying that can prevent an LNG glut hitting Europe's hub markets, inter-regional pricing spreads are likely to remain at a lower range next year.

Indications point to a continuation in compressed pricing spreads, particularly between Asian LNG prices (Platts JKM) and north-west European hub prices. 2019 saw major pricing markers in Europe and Asia converge to a sustained extent not seen before in LNG. The daily JKM/TTF spread turned negative in March 2019 by nearly USD 1/MMBtu, the largest negative differential observed in the last five years, while the monthly average spread only widened above USD 2/MMBtu for one month in the year (as at the end of November).

In 2020, this will be especially worrying for US LNG off-takers that do not have access to oil-linked sales in Asia or the Middle East. They will instead face losses, possibly on a long-run as well as short-run marginal cost basis.

Figure 6 JKM//TTF pricing spreads



Source: *Thomson Reuters, Gas Strategies analysis*

A prolonged period of pricing-spread compression will cause financial pain to some players, but it will also be an important staging post on LNG's journey of maturation and commoditisation. This situation where gas prices in different markets are largely converged, with spreads made up of only the shipping differential, is a signal of growing efficiency within the market, which we see continuing.

Compared to the historical experience of LNG suppliers making high returns by diverting cargoes from the Atlantic basin to Asia, the value pools in LNG will continue to shift and shrink. Value from the trading of LNG will be accessed through sophistication in optimisation of a portfolio of positions, which requires a specific set of capabilities not traditionally nurtured by all participants in this industry.

Many buyers and tollers under long-term contracts will no doubt be challenged by the prospect of sustaining out-of-the-market positions against competitors accessing LNG on spot markers in this oversupplied world. We expect to see a significant increase in our support to clients challenging and defending contractual positions in the face of these price disconnects. For Asian offtakers, this creates a likely imperative to test price review provisions in new ways, and we have already seen the first signs that such reviews may increasingly be settled by arbitration.

Outlook
A challenging trading world

Despite a well-supplied market and low LNG prices, we predict that 2020 will not see a vigorous demand response in Asian markets. A dampening of gas demand due to a global economic slowdown adds to the intense competition from coal and renewables in many growth markets. This will likely result in a continuation of high imports into Europe as the market as last resort.

Geographic price spreads will also narrow as suppliers long on flexible LNG seek any available demand outlet. It seems unlikely that pricing signals will change over the course of 2020, creating pessimism for the long-term.

As has been observed with the oil market following the price fall in 2014 and subsequent stabilisation to a new normal, gas and LNG prices may be heading in a similar direction in 2020. A more efficient and competitive market will benefit those who have been working to build leading trading and optimisation capabilities.

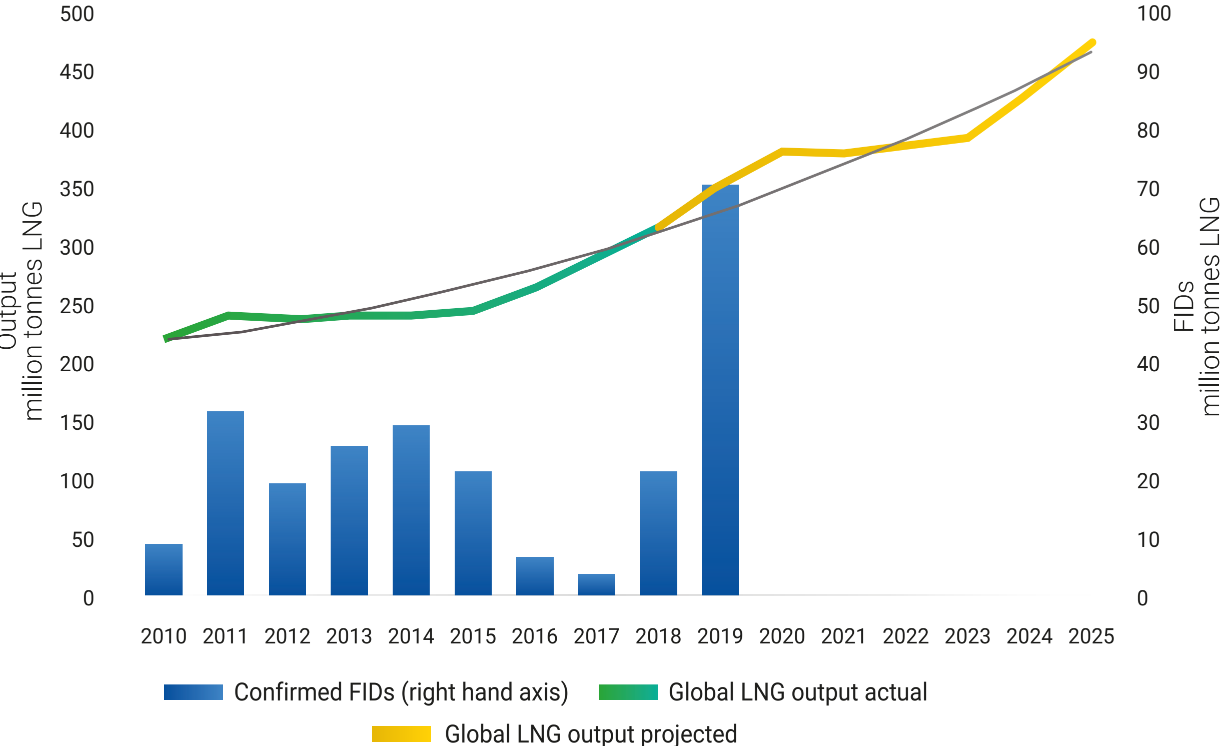
A sign of things to come for investment?

For an industry that has historically placed a lot of focus on new capacity development, a critical question for 2020 is what the impact of this new market reality will be on future investment.

2020 opens with the rolling over of a healthy slate of pre-sanction projects, totalling some 150 mtpa, that had entered 2019 with the stated intention of taking FID within the year – rising to 166 mtpa, if the latest enhancement to the planned Qatari expansion is included.

Most industry demand forecasts point towards an LNG supply capacity excess to 2026, on the basis of existing and under construction plants. This would quickly extend to 2029 as a result of Rovuma LNG and Qatari expansion FIDs alone. This outlook for seemingly another overshoot in capacity, when the market already appears oversupplied, would continue the trend of cyclicity seen in the past decade, demonstrated in Figure 7 opposite.

Figure 7 Global LNG Output, 2000-2025 vs LNG FIDs



Source: *Gas Strategies Analysis, GIIGNL*

We have not attempted to predict which projects could progress toward construction in 2020. However, it seems possible, based on existing momentum and announced plans, that a large volume of capacity could make it to FID. Other than the opportunity for niche projects, this prospect seems surprising at a time when gas inventories are brimming and prices are depressed. Despite this, there is room for different rationales that may drive additional capacity commitments.

Confirming the trend seen in 2019, a significant volume of this capacity will take FID on a speculative basis. This movement of risk down the line for the offtakers will steadily increase as the outlook for long-term gas demand becomes more uncertain.

So why could project developers be taking on this risk in 2020? We see a number of possible drivers:

- A bullish view on the market opportunity created by feedgas shortages at legacy projects which are entering the end of original offtake and gas supply agreements. These include Atlantic LNG in Trinidad and Tobago, and Malaysia LNG (legacy trains), together aggregating to more than 28 mtpa of production capacity.
- The potential for sales as anchor demand into a downstream project in which the developer is involved. The recent announcement by TOTAL of its intention to invest into an LNG-to-power project in Mozambique serves as a good example. This would be a recognition of a situation

of a buyers' market with suppliers required to have more 'skin in the game' in creating short positions.

- In the case of Qatar, a sovereign objective to avoid resource stranding, at the possible expense of lower returns on LNG sales.
- A strategic decision to begin or grow capability in portfolio optimisation as a recognised key ability in a more efficient and low-margin market. The risk associated with this option has probably decreased as the market has become more flexible. This could be linked to a push to build market share in the later 2020's. We see analogies here with ExxonMobil's strategic push into more active physical trading in the oil sector at a time when the oil market is becoming more volatile.

2020 could therefore be a turning point in how new LNG supply is developed. At Gas Strategies we expect that our work in project development and financing will continue to support new project and finance constructs in coming together successfully.

All eyes on the big players

Investment in new capacity aside, 2020 looks set to be the year when generating long-term, stable returns from LNG will become even more challenging. The outlook for market growth will be much more uncertain – an uncertainty increased by different potential outcomes for the role of gas in a decarbonising energy system.

With yet-to-be-made policy decisions setting the long-term trajectory, big players such as the oil majors must plan their businesses under a range of scenarios. They also face the challenge of unclear demands from shareholders on whether remaining committed to fossil fuels extraction or stepping out into renewable power is the best way forward.

LNG occupies a critical place in this strategic decision. With gas positioned as a long-term transition fuel, investments to maintain and grow market share in the only fossil fuel expected – in theory – to grow, are critical. This comes after a decade of high investment by players such as Shell and TOTAL, where the 'gasification' of production portfolios was a key objective. LNG was seen as a route to achieve premium returns for this gas.

Bearish short-term market conditions in 2020 and creeping uncertainty on the role of LNG will test some players' commitment. In organisations like Shell and TOTAL, clear ownership and direction has come straight from the top. Their respective CEOs, Ben van Beurden and Patrick Pouyanne, have personally set and driven the most significant deals, which have brought these organisations

to the top of their chosen LNG industry in the past decade. This will dovetail with the growing strategic theme in LNG of ‘go big or go home’.

Manifestations of this trend will be the continued exits or sell-downs from both upstream monetisers and downstream buyers. The former will be pulled towards short-cycle projects, largely oil, and other gas monetisation routes; the latter towards renewable energy and customer-centric businesses.

Players with a strong strategic rationale for remaining in the LNG business will need to revisit their approach to LNG and, in some instances, the overall business model as it pertains to the wider gas value chain.

Whereas the big players’ investment in LNG had previously been focused on the upstream, with volume growth the key objective, in 2020 we see this continue to shift downstream. We expect to see significant efforts to build world-class marketing and trading capability, such as analytics, trading teams and shipping, and investments in downstream markets. The latter will challenge existing hurdle rates for capital deployment, but will be driven by stronger recognition and measurement of portfolio value from securing long-term market. Such a shift to a full gas value chain model will most likely lead to a shake-out of those in LNG for just LNG’s sake. This includes some US project developers who will not find sufficient buyers to launch their projects.

Outlook
A test of commitment?

In the board game Snakes and Ladders, players compete to reach the top of the board. Players who find themselves on the foot of a ladder are entitled to climb it and fast track towards the top. If they land on the head of a snake, they are forced to slide backwards all the way down its tail. 2020 could see some LNG players land on the head of the snake.

A switch from growth to downturn mode may precipitate a 'shake-out' of projects. It could see developers miss an FID window that may not reopen for some time – effectively falling back down the game board or being pushed out.

In this environment, plans must be adapted to market realities. It seems likely that those with incoming volumes into their portfolios may renew their focus on building market. This will not be straightforward. Falling renewable power costs in emerging markets will throw up another challenge to those trying to develop LNG-to-power projects against competition from other energy sources.

Any major strategy decision regarding LNG is not likely to be based on 2020 events alone. It is possible that 2020 will set the scene for a challenging decade in gas and LNG that may cause some players to reassess their options.

Questioning the idea of 'growing' in this volatile market is sensible in the context of highly uncertain long-demand prospects. This speaks to the wider challenge of committing to long-cycle projects across the oil and gas industry, when the dynamics point to greater apparent certainty from short-cycle projects such as shale.

Conversely, for those already 'all in' on LNG, the raising of barriers to entry or growth for smaller organisations may motivate further expansion, possibly through acquisition of the portfolios or projects of those seeking to exit. This will highlight another indicator of maturation: market concentration.

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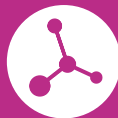
Consulting

+44 (0) 20 7332 9900
consult@gasstrategies.com



Alphatania Training

+44 (0) 20 7332 9900
training@gasstrategies.com

Information Services

+44 (0) 20 7332 9976
subscriptions@gasstrategies.com

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Gas Strategies is the trading name of Gas Strategies Group Limited.
Registered company address: 10 St Bride Street, London, EC4A 4AD

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