Gas Line, Q1 2019

By Nikos Tsafos

APRIL 2019

Gas Line is a newly launched quarterly publication that looks at major news stories in global gas—ranging from project development to markets and geopolitics. My goal is not to cover every story but to draw connections between stories across time and space in order to shed light on the major themes that will drive global gas markets in the years ahead.

2018 WAS A GOOD YEAR FOR GAS DEMAND (SORT OF)

The bottom line: Initial data from the International Energy Agency (IEA) show that gas demand grew strongly in 2018—twice as fast as energy overall. But more than two-thirds of the growth came from the United States, where prices remain low, and from China, where policy is enabling gas despite it being often uncompetitive. In short, lingering questions about whether gas can really compete are reinforced, not silenced, by the 2018 data.

The backstory: The IEA estimated that gas demand grew by 4.6 percent in 2018, its highest rate since 2010 (when demand recovered from the financial crisis). At first glance, this is good news for gas since overall primary energy demand is estimated to have grown by 2.3 percent—meaning the market share of gas increased. Yet 70 percent of the growth came from the United States and China, which tells us something about gas and its role in the global energy system. In the United States, gas continues to gain market share because prices remain low; in China, gas is gaining market share largely due to policy, even though imported gas is still often sold at a loss. Gas still went up elsewhere—by 1.8 percent, once we account for the decline in Europe, but this is just above the 1.5 percent growth in primary energy demand outside the United States and China. So, gas marginally increased its market share, but its boom was largely driven by one country where prices are very low and another where prices do not fully matter. It was a good year for gas demand but with some major qualifiers in that statement (for a deeper dive into gas penetration across various regions see “Is Gas Winning” from June 2018).

THE NEXT LNG FID WAVE IS HERE

The bottom line: The liquefied natural gas (LNG) supply race is heating up with projects making progress not just in the United States but also in East Africa, Russia, and even Australia. There is still no single pathway to taking final investment decision (FID): some projects are taking FID without long-term sales contracts or external finance, and others are taking a more traditional route that relies on long-term contracts and third-party financing. There are, in other words, still many models, not a shift from an “old” model to a “new” one. The big unknown: if so many companies take FIDs without long-term contracts because they can always sell the LNG on the spot market, might there be an overcorrection that leads to a glut and depressed prices?

The backstory: FID in LNG supply projects picked up in late 2018, and 2019 started strong as well with Qatar Petroleum (QP) and ExxonMobil taking FID on the Golden Pass project on February 5, 2019. The activity in Q1 2019 mostly came from three main areas.

In the Lower 48, the Calcasieu Pass LNG received a certificate order from the Federal Energy Regulatory Commission (FERC), following a breakthrough that let FERC account for the emissions impact of LNG projects. Calcasieu Pass also received an export authorization from the Department of Energy (for countries with which the United States does not have a free trade agreement); the project hopes to start construction soon. FERC also issued final Environmental Impact Statements for Driftwood, Port Arthur, and Texas LNG (and a draft one for the Jordan Cove project). Meanwhile, press reports suggested that Cheniere Energy might sign a long-term contract with Sinopec, once an agreement over trade was reached between the United States and China, which could allow Cheniere to go ahead with Train 6 at Sabine Pass. And Shell announced a deal with Energy Transfer to rejuvenate the Lake Charles project, which had fallen off the radar for a while. And NextDecade and Tellurian both announced offtake agreements during the LNG 19 conference. In short, we might see a few more FIDs from the United States in 2019.

In Russia, NOVATEK finalized an agreement with Total (France) for the latter's participation in the Arctic 2 LNG project in Russia, while other partnership negotiations are ongoing—reportedly, NOVATEK and Saudi Aramco are nearing a deal, and negotiations are continuing for Japanese participation in the project. In Mozambique, Anadarko announced sales and purchase agreements (SPAs) for its project with Pertamina, Bharat, Shell, Tokyo Gas and Centrica, and CNOOC—a sign that the project is gearing towards FID. Anadarko also announced that one worker was killed and two injured during an attack near its construction site in Mozambique, underscoring the security risks brewing in northern Mozambique. (It is also possible that damage from Cyclone Idai could affect the project's timetable). And reports suggested that contractors submitted bids for the other LNG project in Mozambique.

Beyond these obvious focal points, Australia made some news too. Of course, the emphasis was on the fear that its projects located in Queensland might under-perform because they lack sufficient gas to run at full capacity and that imports might be needed (there are five import terminals proposed right now). But on the other side of the country, Woodside is planning to ramp up its LNG supply, a long-standing ambition that the company is pursuing with added vigor: it awarded four contracts for its proposed Scarborough project, following an announcement in late 2018 to launch the front end engineering and design (FEED) work for its long-awaited Pluto 2 project and a preliminary agreement to send gas from its Browse fields to the NorthWest Shelf facilities. In short, Australia might not sit out this new wave.

At the same time, a few other places are picking up steam. In Papua New Guinea, the partners are advancing an expansion project, even though there are still some hurdles to be worked out (for instance, around the need to reserve some gas for the domestic market or the call by the government for the companies to finance the government's share in the project). In Timor-Leste, the government is working to buy out Shell and ConocoPhillips' share in the Greater Sunrise project, and it suggested it might reach out to China for help in developing the long-stalled LNG project.

It is clear, however, that there is no standard pathway to FID. LNG Canada and Golden Pass took FID without long-term contracts announced, although some partners in LNG Canada announced contracts for their share of the output, and QP later said the LNG would be marketed by Ocean LNG, a joint venture with the same ownership as Golden Pass. The Greater Tortue Ahmeyim floating LNG project in Mauritania/Senegal sold all its output to one of its partners (BP). But Calcasieu Pass and Mozambique LNG have by long-term SPAs, although the Mozambique contracts are the lower-end in terms of duration (13 to 15 years), and reportedly have a mixture of indexation to oil and gas hubs. And the contracts are coming from the majors, as well as traditional and new buyers in Asia and Europe. Meanwhile, NextDecade is selling LNG from the United States at prices (partly) linked to crude oil, while Tellurian announced in late 2018 a contract to sell LNG to Vitol on a price linked to the Platts Japan Korea Marker (JKM) price in Asia (and another contract with Total, also tied to JKM). There is, in other words, continuous tinkering with the approach to FID.

MARKET WATCH

The bottom line: The LNG glut might finally be here. Spot prices in Asia and hub prices in Europe have both fallen, and there is more LNG reaching Europe since it nowhere else to go. So just as companies are getting ready to take FID on the next tranche of supply, prices are falling. In the past, low prices have triggered a demand response—will this happen again or might supply be shut in? And might near-term bearishness put a dent on FIDs, since companies always seem to be overly influenced by short-term dynamics for what are, effectively, very long-term decisions?

The backstory: The dominant market story in the first quarter was the influx of LNG into Europe, which reached an all-time high, above the monthly peak of November 2010 (per Platts). This flow has coincided and triggered a steady drop in gas prices in Europe, with title transfer facility (TTF) in the Netherlands having fallen by about 40 percent relative to its recent high in late September 2018. The inevitable questions are: for how long will this inflow continue and how low will prices fall; will low price trigger a demand response, either within the power sector in Europe or elsewhere; and, more importantly, will Gazprom curtail production to support prices, or might low prices lead some U.S. (or other) LNG to be shut in?

In the mature Asian markets, we see some conflicting signals for LNG demand. Nuclear power has started to pick up again in Japan, leading 2018 LNG imports to be 6 percent below their 2014 peak. As nuclear power continues to rise (though how far and how fast remains an open and complicated question), LNG should decline further. In South Korea, LNG imports rose by 17 percent in 2018, reaching an all-time high, due to weather and reduced output from coal and nuclear; the Korean government also announced a cut in import duties for LNG that will make LNG even more competitive vis-à-vis coal. And in Taiwan, CPC announced it might soon start construction on a third LNG import terminal, while Marubeni (Japan) broke ground on a large gas-fired power plant in the country, aiding the country's stated move away from nuclear power (and possibly displacing coal too).

Elsewhere in Asia, a few notable stories stood out. In China, plans to create a midstream oil and gas company are progressing, even though the idea has been in the works for a while; and China National Offshore Oil Corporation (CNOOC) is offering third-party access to its LNG terminals, although the terms seem quite restrictive so far, and experience shows that true third-party access takes years and several iterations to fully materialize. It is, however, clear evidence that China's gas market is maturing, and the government is looking for ways to evolve the market's structure onto the next phase. In India, Indian Oil Company inaugurated the first regasification terminal on the east coast, even though downstream linkages will limit utilization, in what has become a common theme in Indian LNG in recent years.

In the Philippines, Phoenix Petroleum said it received government approval for a regasification terminal it plans to build with China's CNOOC. This is a major development in that import infrastructure in Southeast has not traditionally involved foreign companies or foreign financing. A deal last year in which the Japan Bank for International Cooperation (JBIC) agreed to finance an floating storage and regasification unit (FSRU)-to-power project in Indonesia was an exception rather than the rule for LNG projects in the region. Perhaps these are signals of a new era.

THE BATTLE FOR EUROPEAN INFRASTRUCTURE

The bottom line: The battle for gas in Europe is heating up, not only because LNG imports are growing but also because we saw a lot of movement on European infrastructure—both on the pipeline front (Nord Stream and Turk Stream) as well as on LNG (in Germany, Poland, and Croatia). We are clearly headed for a European market where there will be more competition between LNG and pipeline gas and where infrastructure continues to be highly political (in both intent and impact), despite a long-term effort to turn the European gas market into a system where markets, rather than politics, determine flows and investments. And of course, the United States is still fine-tuning its approach to European gas—wavering between imposing sanctions, selling LNG and, briefly, even considering extending additional finance to support European diversification.

The backstory: In Europe, the European Commission approved funds to help Poland expand its regasification capacity at the Świnoujście facility, while the Croatian government took FID on the long-delayed Krk project (also supported by funds from Europe), even though protests against the development continue. Meanwhile, the plans for Germany to develop LNG import capacity received a boost when ExxonMobil signed a non-binding agreement to book capacity at Uniper's FSRU in Wilhelmshaven, just as two other projects are advancing as well in the country (one in Hamburg, and one in Rostock, although the latter is currently bulled as a transshipment facility). And the U.S. House advanced a bill (H.R. 1616) that would add more funding to support energy infrastructure in Central and Eastern Europe (but not the $1 billion envisioned by an earlier version of the bill).

But the activity in Europe is not only focused on LNG. In Bulgaria, Bulgartransgaz announced an FID on a pipeline from its border with Turkey to the border with Serbia—the pipeline will carry gas from Turk Stream. Serbia is similarly engaged in a process to connect a point on the Bulgarian border with its Hungarian border—thus enabling gas to flow into Central Europe, with additional reports that Hungary might receive gas from Turk Stream by late 2021. There was also a big piece of news in Bulgaria, whereby Greece's DEPA won a tender to supply gas to the country, thus opening up a new gas option for the country. And of course, in the north, the European Union reached an agreement on applying EU law to the proposed Nord Stream 2 pipeline, even though the implications of that decision are still unclear; and Denmark is still weighing whether to approve the project, with reports suggesting Danish authorities asked for an environmental assessment for a third route. All the while, there is still no firm agreement on gas transit through Ukraine post-December 2019, raising the risk of a disruption come January. Besides the short-term risks, we are clearly headed into an even more competitive gas market with additional areas where pipeline gas and LNG compete more directly—especially if the European Union can enforce significant third-party access provisions on the corridor from Turkey to Hungary.

A FEW MAJOR DISCOVERIES—QP EXPANDS

The bottom line: Discoveries hint are useful to keep track because they hint at what might come, and three major discoveries stood out in the first quarter: in South Africa, in Indonesia, and in Cyprus. In South Africa and Cyprus, these discoveries can reshape those energy markets, although the path to commercialization will be tough. And one notable fact about these discoveries: QP was a partner in two of them—a sign of the company's growing ambition to be a major player. So far, the company is mostly building positions alongside a few partners—more opportunity than clear strategy. But in a few years, QP could find itself in possession of a sizable overseas hydrocarbon portfolio, providing an additional outlet for a country that has been ostracized by many of its neighbors.

The backstory: On February 7, Total (France) and its partners announced a major gas condensate discovery offshore South Africa; Total CEO Patrick Pouyanné later said the discovery could hold up to 1 billion barrels of oil equivalent: "It is gas condensate and light oil. Mainly gas." South Africa has a small gas market in a gas-to-liquids (GTL) plant and industry; for years, it was explored plans to develop an LNG import terminal. This new discovery could give a further impetus to a country where gas is still just 3 percent of the primary energy mix, although finding the right formula for development could take time.

On February 19, Repsol and its partners announced a discovery at the KBD-2X well in Indonesia, which they estimated could hold "at least 2 trillion cubic feet (TCF) of recoverable resources," and "is the largest discovery in Indonesia in the past 18 years." Indonesia remains a major LNG exporter, although, over the past two decades, its net exports have fallen, as has the share of gas in primary energy, evidence of a mature basin where production has struggled to keep pace with demand potential. However, the Indonesian government is always keen to attract more exploration, and once discoveries are made, see those finds through to development. This will be an important development to follow—both for the country's own demand, as well as for its position as a net exporter to Asia.

On February 28, ExxonMobil and partner QP announced a major gas discovery at the Glafkos-1 well in Cyprus, estimated to hold 5 to 8 trillion cubic feet (tcf) of gas in place. This is good news for Cyprus but only partly so. For one, this is gas in place, and it is an early estimate—it will take time to come up with a firmer grasp of how much gas is recoverable. At the high end of that 5 to 8 tcf range, this field could support a liquefaction facility; at the lower end, it is still possible to turn into LNG but with a smaller facility. The commercial case will really depend on size. More importantly, there is other gas that has been discovered in Cyprus: will the gas be consolidated into a single stream to be sold, and if so, how complicated will that effort be? Or will each consortium be let to pursue its own plans?

Just in a single quarter, QP made a lot of international news. Together with ExxonMobil, it took FID on the Golden Pass facility in Texas, and it announced, together with its partners, major discoveries in both Cyprus and South Africa (mentioned above). In March 2019, it acquired a 25.5 percent stake in the Eni-operated Block A5-A offshore Mozambique, and it bought into 12 exploration blocks, also operated by Eni, in Morocco. This follows two major announcements in December 2018 to acquire a 10 percent stake in three ExxonMobil-operated blocks in Mozambique and three offshore fields in Mexico (operated by Eni). So far, QP is mostly capitalizing on a few strong relationships, but it is showing a strong appetite to reach and far and wide to diversify its operations, and perhaps build new links at a time when the country is diplomatically isolated by many of its neighbors. This is likely going to be a continuing story to watch.

Have Feedback about Gas Line? Send a note to Nikos at ntsafos@csis.org.

SOME FURTHER READING

- Shell LNG Outlook 2019, February 2019.
- BP Energy Outlook 2019, February 2019.
- "A new wave of LNG supply is building," Timera Energy Blog, March 18, 2019.
- Claudio Steuer, "Outlook for Competitive LNG Supply," Oxford Institute for Energy Studies, March 2019.
- Greg Molnár, "How low can gas prices go? A bearish outlook," LinkedIn Post, March 11, 2019.
- Navigant, "Gas for Climate: The optimal role for gas in a net-zero emissions energy system," Report for the Gas for Climate: a path to 2050 group, March 2019.

- IEA, "Global Energy & CO2 Status Report," March 2019.
- Fabio Reale, "JKM collapse below TTF brings Qatar, US LNG exports into focus," S&P Global Platts, March 25, 2019.
- GIIGNL, 2019 Annual Report, April 2019.
- International Gas Union, World LNG Report, April 2019.

***Nikos Tsafos** is a senior fellow with the Energy and National Security Program at the Center for Strategic and International Studies in Washington, D.C.*