

GLOBAL LNG OUTLOOK

KEY INSIGHTS ON CURRENT & FUTURE TRENDS



INTRODUCTION

Expectations of strong natural gas demand growth over the next decade - combined with likely short-term strength as the global economy recovers from the impact of the Covid-19 pandemic - have scrambled the outlook for project developers and buyers alike.

For some suppliers like Qatar, the new landscape offers enough upside to justify large new investments in capacity that remains largely unsold. Qatar Petroleum, the world's largest LNG supplier is just the latest global energy company to move ahead on expectations rather than a portfolio of signed long-term contracts. Projects backed by Shell (LNG Canada), and

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Demand growth is set to accelerate as the global economy pulls out of last year's Covid-19-linked downturn.

SUPPLY 13

The Qatari decision to proceed with its 33 MMt/y North Field expansion adds to global supply but will require other developers to ensure their projects are highly competitive.

PRICING

Higher oil prices following December's record setting LNG spot market prices and expectations of higher demand have prompted Poten to raise our price forecast.

SHIPPING 17

Although there were nine new build deliveries in the fourth quarter, there were 16 newbuild orders during the same period, highlighting continued abundance of freight capacity.

QP/ExxonMobil (Golden Pass), among others, already have been sanctioned without lining up a large end-user customer base first.

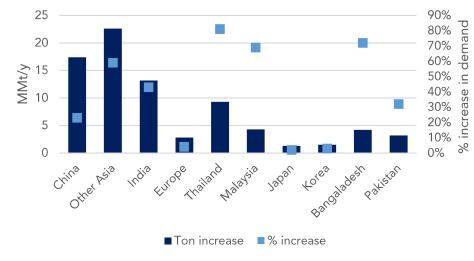
But the decision by Qatar to go ahead with a four-train 32MMt/y North Field expansion is by far the largest bet on the future of LNG without the security that accompanies projects that are backed by long-term contracts to secure project finance.

The Qatari decision - combined with suggestions that additional expansions could be forthcoming - narrows the path for the many projects looking to take the project finance route to FID. Qatar is working hard to pre sell volume from the expansion trains, but even before its decision to move ahead, it had been struggling to sell volumes that were becoming available as its first wave of long-term contracts expire. The decision to go to FID on the expansion despite the lack of contracts suggests that QP is prepared to compete hard for long-term contracts and deal aggressively to place volume on spot and short-term markets as needed.

Over the past several years, Qatar has been more assertive as it faced the expiration of many large contracts with Asian and European buyers. As talks to extend those contracts produced little, Qatari officials realized that its LNG business would require a more competitive and agile approach, not always an easy decision for state-owned companies. But the signs of this sea change have been emerging for years, from the 2015 decision to renegotiate a deal with India's Petronet to a slew of highly competitive offers in bilateral negotiations and tenders. In recent months, Qatargas has won tenders or been on the short list with very aggressive bids and more flexible terms than it had offered in the past.

Of course, Qatar benefits from additional revenue from condensates and LPG from its gas production – in addition to very low feed gas costs – so Qatar stands to earn substantial profits over time. But competitors should make no mistake that the Qatari decision to go ahead with at least one major expansion is a signal that competition will be fierce.

DEMAND ADDITIONS: 2024 - 2031



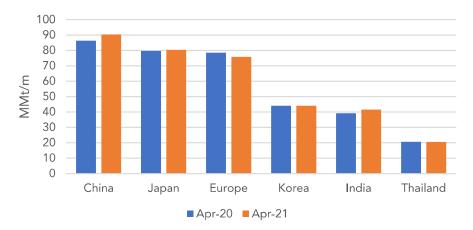
This adds to the challenges faced by other producers looking to advance their projects. US producers have been working for years to make their projects more competitive and these efforts have allowed many to cut liquefaction fees to well under \$2/MMBtu. Others are using innovative approaches to try to secure offtakers such as capacity tenders, contracts tied to international - rather than US – benchmarks and locating projects in Mexico to reduce permitting costs and to try to tap cheaper stranded gas supplies.

While some of these efforts appear to be helping to move some US projects forward, at least incrementally, it is telling that 2020's only FID was Energia Costa Azul, a small brownfield project located on Mexico's West Coast, tapping what developers and buyers hope will be cheap natural gas from the Permian Basin. So despite successful cost cutting and innovative efforts to woo buyers, larger and better known US Gulf Coast projects continue to face headwinds.

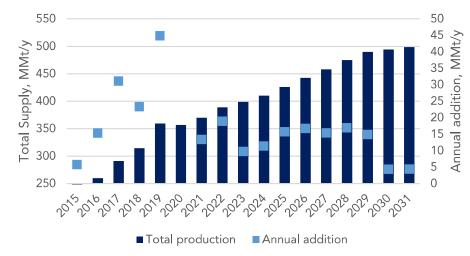
Of course, much depends on demand going forward. The Qatari FID and modest progress at some other global LNG projects have been driven in part by forecasts showing that global natural gas demand will grow at a healthy pace for the next few decades. Even the European Union – with its heavy focus on reducing carbon emissions – foresees a world in which fossil natural gas – along with renewable natural gas and hydrogen – coexist for many years.

The challenge is that demand growth is increasingly concentrated in relatively few countries, mostly in Asia Pacific. Poten's forecasts total demand growth in the Americas through 2031 of just 3.2 MMt. In Europe, Poten forecasts just 500,000 t of new demand through 2031, with some declines in northwest Europe, offset by increases in Germany, Croatia, Turkey, Spain, Poland, Cyprus, Malta and Lithuania. But European LNG demand will be reactive to what happens in the rest of the global LNG market. If the market is tight in Asia

DEMAND FORECAST COMPARISON - APRIL 2020 VS. APRIL 2021



SUPPLY ADDITIONS



Pacific, Europe will see its imports decrease as LNG sellers target high prices in Asia and a large amount of Atlantic LNG supply is shipped to the Pacific to capitalize on higher netbacks. In a long market, Europe's imports will increase, balancing the market and acting as a market of last resort.

By contrast, Asia Pacific demand is forecast to grow 106 MMt during the next decade and the Middle East will add another 4 MMt of demand during the same period. But even in Asia, demand growth is highly concentrated as the traditional consumers – Japan, South Korea and Taiwan – will add just 8.4 MMt over the next ten years. The bulk of Asia Pac growth will come from China, South East Asia, India and other South Asian nations. With expected demand of about 130 MMt in 2021, these

dozen countries or so will add 97 MMt of new demand by 2031.

With so much at stake in so few countries, producers and others seeking to expand their businesses will have to ensure that projects and contracts offer Asia Pacific buyers the value and terms they are seeking.

Poten's latest forecast indicates there is enough demand to support additional new liquefaction capacity. But it is becoming increasingly clear that the projects that reach FID will be the ventures that convince Asian buyers that they offer a combination of flexibility and reliability.