

# LNG to grow twice as fast as overall demand for gas

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**F**ifty years ago, in October 1964, the world's first commercial cargo of LNG was imported into the UK from Algeria by the UK's Gas Council, a forerunner to BG Group.

Fast forward 50 years to the present day, and it is clear that our industry has grown significantly following this first global LNG trade, clocking up around 75,000 cargoes and expanding to 27 importing countries and 17 exporting countries worldwide. That is quite a track record, and we are an industry that is showing no signs of slowing down.

## Future demand

Looking forward, BG Group projects that LNG will grow at around 5 per cent per annum to 2025, twice as fast as overall gas demand growth. Asia will be the key driver of this global LNG demand growth, underpinned by strong regional gas demand growth.

Residential use of gas in Asia is being driven by increasing urbanisation and higher living standards. Urban centres are growing by almost four million people each month. In China, this trend accounts for some 20 bcma of gas demand growth each year.

Industrial demand in Asia is the result of strong economic growth in its emerging markets and the increased availability of gas to replace higher cost liquid fuels. Across Asia, coal is still the dominant fuel for generating electricity. However, as increasingly prosperous urban populations demand cleaner air, we are seeing a shift to gas in the wealthier regions.

There are also increases in demand in other new and exciting areas, such as transportation. Latest estimates suggest that there are now over 60,000 heavy trucks in China alone, running on LNG.

## Potential new suppliers

By 2025, most industry commentators expect that the global LNG trade will reach over 400 million tonnes per annum (mtpa).

Meeting this LNG demand will be a significant challenge, although new potential large-scale suppliers are emerging.

All eyes are understandably on the US, where there is currently close to 270 mtpa of export capacity proposed in the form of 31 projects. That is far more than has ever been proposed in a single country before.

Given that the total global LNG trade in 2013 was only 240 mtpa, clearly not all of the proposed US projects will get built.

The total volume of US exports will be shaped initially by the US licensing process and timing of federal regulatory approvals. Then later, by a number of factors including: additional Department of Energy reviews, local opposition, developer capability, access to financing, and the desire of buyers to maintain a diversity of supply sources. Of these factors, we believe local opposition, developer capability, and buyer supply diversification will ultimately drive how much US export capacity gets built.

*The Methane Kari Elin LNG vessel is part of BG Group's core fleet of LNG ships.*



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Bearing all of this in mind, we believe that only a quarter – around 60 to 70 mtpa – of currently proposed export capacity will be in place in the US by 2025.

In addition to the US, over the past two years western Canada and East Africa have also emerged as potential large-scale suppliers. A combination of the constraints on US exports and of the buyers' desire to diversify supply sources will bring on new projects in these locations. The current wave of capital investment in both Canada and East Africa by buyers is evidence of this.

What is less certain about these projects are the proposed delivery times. In our industry, projects are often sanctioned later than anticipated and then come onstream later than planned.

LNG supply projects are by nature complex, large-scale and capital intensive. Data from PFC Energy shows that nearly half the new LNG capacity currently proposed worldwide has lead partners with no previous LNG development experience. That lack of expertise in LNG project delivery represents significant execution risk, particularly when environmental challenges are considered.

Our industry needs to add around 150 mtpa of new capacity, above that already under construction, by 2025 in order to reach the trade levels forecast by most industry commentators. Even with the large slate of proposed projects in the US and elsewhere, we believe that supply, rather than demand, remains the key challenge for the industry. We also believe there is significant upside to current forecasts of demand; particularly those for Asia. As a result, we do not foresee proposed new supply projects creating an oversupply in this timeframe.

### Pricing evolution

In addition to future supply and where it's going to come from, LNG pricing is another subject being scrutinised at present.

Although the market is clearly evolving, there is a myth that Henry Hub priced US LNG exports will provide a significantly discounted LNG supply source to Asia. This is not the case. Full cycle costs of US LNG exports delivered to Asia markets will have at least a US\$6 to US\$7/mmbtu premium to Henry Hub prices. This is based on the cost to liquefy and ship the LNG to Asia, and this is before a seller margin is added.

LNG prices will continue to be driven by the same

fundamentals that have driven the LNG market in the past. Price levels will be set by supply and demand for new long-term volumes – as has always been the case. In a world where Asia continues to generate the bulk of new demand and pull volumes in competition with other markets, it will remain the price setting region.

Domestic supply availability, market regulations and structures will still determine whether gas hub pricing is possible. In practice, it is unlikely to happen in Asia for some time.

As a result, we expect that regional markets will remain differentiated in terms of pricing mechanisms and oil indexed contracts will remain a key part of the pricing mix in Asia for the foreseeable future. Despite the current focus on Henry Hub indexed pricing, oil indexation is far from dead.

Another factor underpinning our view on pricing is the still largely inflexible nature of the LNG market. Although the level of flexible volumes in the industry has increased markedly, from 4 per cent in 2000 to 17 per cent today, the addition of flexible exports from the US only acts to keep these volumes steady as a proportion of total trade. So, not only will the world not be awash with 'cheap' US LNG, it will not be awash with flexible LNG.

### Changing dynamics

Looking at the LNG industry today, the dynamics are clearly changing. We are clearly an evolving industry, with new suppliers, markets and players emerging. We have also seen increasing flexibility and an evolution in LNG pricing,

However, despite the changes over the past few years, we are still some way from gas becoming a globally traded commodity such as oil. That, however, does not mean that the industry should not be proud of its achievements thus far.

Since the first 12,000 tonne cargo of liquid methane arrived at the Canvey Island Terminal in the UK from Arzew in North Africa 50 years ago, our industry has come a long way. There are now over 380 LNG ships in operation around the world and in 2013 around 240 million tonnes of LNG was delivered, representing around 10 per cent of all gas consumed worldwide. Looking forward to the next 50 years, I am certain that LNG will continue to play an increasingly important role in the world's energy mix. ■