

U.S. LNG Exports: Serious Headwinds Cloud Long Term Prospects

By Sreekanth Venkataraman

While there has been an undeniable glee at how the U.S. LNG exports could potentially give Washington geopolitical leverage by allowing it to ship cheap energy to its allies in Europe and Russia, that enthusiasm was always laced with a caveat that LNG exports were more likely to be a geopolitical weapon only in the long run. However, it seems that even the long term prospects need to be tempered with caution.

Take the case of Europe for instance. While the construction of new LNG terminals in the EU are believed to have the potential of enhancing the long term prospects, several essential conditions need to be factored in before enthusiasm over long term prospects of U.S. LNG exports can be justified. Firstly, price parity needs to be achieved between U.S. gas prices and Russian gas prices, which are lower. Critically, the U.S. LNG exports must be able to compete with Russian piped gas, which is still cheaper than LNG and one cannot discount the possibility that new Russian pipelines may depress gas prices further, if completed (Nord Stream 2 and Turkish Stream). While several EU member states have asked the EU Commission to stop the Nord Stream 2 project, the current tensions between Russia and Turkey have increased the chances of its completion. There is also much speculation about Russia's likely response to U.S. LNG exports. If Russia's gas strategy mimics that of Saudi Arabia's oil strategy, it could push European gas prices to levels that could force the shut-in of U.S. LNG exports.

Secondly, forecasts of European demand for LNG are not clear. While the high demand scenario (42% in the next 10 years) bodes well for the U.S. LNG industry; a low demand scenario foresees very little growth in imports because of the uncertainties and low economic growth. This uncertainty raises the question whether the suppliers will have sufficient risk appetite to be able to play an important role in EU's energy future. Thirdly, the role of Iran in EU's energy security cannot be ruled out as sanctions over Iran ease. In fact, the EU Energy Chief's recent statement that Iranian LNG could start to play a significant part of EU's energy mix in the next 3-4 years should send the alarm bells ringing in the Capitol. The EU has estimated that by 2030, the bloc could be importing between 25 and 35 bcm of LNG from Iran. This belief is fueled by the fact that Iranian authorities are looking to complete three LNG plants that were in the works before the sanctions were imposed early in the decade. While there are doubts (due to high domestic demand and high price vis a vis Russia) over Iran's claims about their export potential (beyond their immediate neighbors), one cannot entirely discount the fact that any delay over processing of export applications by Washington can mean the EU could potentially develop a greater reliance on Iranian gas for their energy needs.

Turning our attention to Asia: until recently, American gas was directed primarily to the Asian markets, where prices were generally higher than in Europe. Owing to a number of reasons such as nuclear energy coming back online in Japan, etc., the demand of LNG has slowed significantly in Asia, leading to a lowering of gas prices. Fresh supplies from U.S. and Australia have contributed to a further plummeting of the average spot price of gas to a 7 year low of \$4.24 per million BTU. Amongst other factors, the unwillingness of Asian importers to buy more gas on the spot market – given they have already contracted to purchase more than they currently need – has been a principal factor responsible for the decline. So, how do the long term prospects in the major epicenters of Asia such as Japan, Korea, China, India look?

The chance of substantial demand growth for LNG in Japan is bleak. The Japanese government as a matter of policy looks at gas as a medium load for power plants. Coal and nuclear serve as baseloads for power plants while renewables are meant for peak load applications. In other words, the system is not willing to depend too much on gas and consequently, the share of gas in the power sector is slated to come down from 48 % to 25-30% in the next few years. While Japan may be likely to buy somewhere between 20-30 million tons of gas between 2019 and 2024 , it should not be construed as demand growth as the country will look to buy from existing projects with unsold volumes, which are significant. The demand for natural gas in Korea is on a permanent decline and this is largely due to the resurgence of coal in Korea. While the supply replacement will happen in the mid 2020's, the supply replacement volume is not likely to be drastic (unlike Japan) because they entered the LNG market much later.

The demand for natural gas in China has hit the brakes, growing at barely 1-2%. The slowdown in the

Sreekanth Venkataraman is an Associate Professor at the Mahindra Ecole Centrale in Hyderabad, India. He may be reached at sreekanth.vraman@mechyd.ac.in

growth of the economy, while one of the contributing reasons, is not the culprit. The real culprit is the high price of gas – both domestic and imported. The government increased the price of gas just prior to the collapse of world oil prices to \$10.85 per mBTU, which is nearly 5 times more than the price of gas in U.S. At prices as high as these, there is bound to be a drastic slowdown in the growth. Would the demand see a revival if the prices were reduced? Unlikely, because the other issue is the economy is presumably growing much slower (around 4% p.a) than recorded by official estimates (7% p.a). Add to that, the uncertainty surrounding the long term outlook for the Chinese economy and the possible continued slowdown for the next couple of decades, the long term prospects for LNG look uncertain. The situation in India, on the other hand, is the exact opposite of China. There is little demand for imported LNG because domestic gas prices are very low owing to cross subsidization. LNG demand in both India and China could see better days if the respective governments keep away. Plausible but not very likely.

There is a belief that the demand slowdown in the traditional big importers can be compensated by the new demand emerging from countries such as Thailand, Indonesia and some of the Arabian countries. The demand for LNG from all these countries may amount to nothing more than the LNG demand from Korea, the second biggest importer of LNG. The volume is not insignificant but surely, it is not enough to compensate for the demand slowdown.

Despite the serious headwinds in the LNG Industry globally, there are optimistic viewpoints that claim the longer-term view for global LNG remains positive, with Asia set to be a significant LNG buyer globally and U.S. becoming a force to reckon with on the global natural gas export scene. Even if the Asian LNG market provides a relief to the suppliers in the medium-long term (once the price of LNG in Asia is indexed to the regional gas fundamentals and there is a shift away from short term contracts), the competition is also likely to get stiffer with a major threat coming from Australia. Gorgon, Australia's most recent LNG project and the most expensive in the world, has the potential to catapult Australia to the position of top gas exporter globally. All this means that the U.S., in its new role of a natural gas exporter, will have to brace up for a dirty fight. Not all of the gas producers will survive and those that do will have to probably pour several billions of dollars into building liquefaction capacity. Only the most resilient are likely to survive, with probably only a few making a satisfactory return on investment.

Energy: Expectations and Uncertainty

Proceedings of the 39th IAEE
International Conference, Bergen, Norway
June 19 - 22, 2016
Single Volume \$130 – members; \$180 – non-members

This CD-ROM includes articles on:

- Decentralised PV and Other Systems
- Natural Gas Markets and Transportation
- Policies and Regulations in the Electricity Market
- Aspects of Public Choice
- Electricity Grid Financing & Regulation
- Intermittent Renewable Electricity Generation
- Financial Risk and Electricity Markets
- Innovations and Technologies
- Heat and Electricity
- Prospects for Nuclear Power
- Wind Power
- Electricity Demand and Retail Prices
- Oil Markets and Trade
- Renewable Energy Policy
- Emission Pricing
- Changing Wholesale Market Structures
- Energy Services and Energy Demand
- Investments and Real Options
- Emissions in the Residential and Transportation Sectors
- Energy Efficiency Measures and Measurement
- Energy Security in Power Systems
- Energy Demand in Households and Industries
- Fossil Fuel Extraction
- Flexibility Options
- Upstream Petroleum Economics
- Impacts of RE Use
- Emission Permits Trading
- Demand Response & Retail Markets
- Regional Electricity Markets and Network Constraints

Payment must be made in U.S. dollars with checks drawn on U.S. banks. Complete the form below and mail together with your check to:

Order Department

IAEE

28790 Chagrin Blvd., Suite 350

Cleveland, OH 44122, USA

Name _____

Address _____

City, State _____

Mail Code and Country _____

Please send me _____ copies @ \$130 each
(member rate) \$180 each (nonmember rate).

Total Enclosed \$ _____ Check must be in
U.S. dollars and drawn on a U.S. bank, payable to
IAEE.

