

EIC INSIGHT REPORT

LNG

Executive summary

The Liquefied Natural Gas (LNG) insight report describes the role natural gas has to play in overcoming the energy challenge of meeting consumer demand while minimising carbon emissions. It focuses on LNG which is produced by cooling gas in a refrigerated cycle at -160oC into liquid form, and provides an outlook of LNG project developments, activity in key markets, challenges and positives in the industry and a brief review of recently awarded contracts. Countries striving to meet air quality and climate targets are seeking a change in their energy mix, and it has been forecast by the International Energy Agency (IEA) that gas will overtake coal as the second leading source of energy consumption by 2030. LNG, has some key advantages over pipeline gas which include; its flexibility allowing it to bypass pipeline routes, it also occupies less volume than natural gas making it more cost effective over long distance transportation, and it can avoid most of the geopolitical restrictions pipeline natural gas has to deal with.

The current global liquefaction capacity which is approximately 430 mtpa is due to increase by an estimated 295 mtpa of capacity under construction, and the U.S. which is now a net exporter of natural gas following the shale boom is projected to account for the highest growth in

liquefaction capacity till at least 2026. For regasification, the current global capacity is approximately 830 mtpa and there is an estimated 130 mtpa of capacity under construction. India is projected to account for the highest increase in capacity within the period until 2025, and China becoming the top importer of LNG.

The expectation based on estimates is that there will be an LNG supply gap in the mid-2020s when new capacity is under construction, and this makes project success a priority in the industry. Some of the barriers and challenges LNG projects have faced stem from overbudgets, time delays, environmental resistance, final investment decisions uncertainty, supply chain management and geopolitical reasons in some cases. It is important the industry can optimise these projects through better collaboration with the supply chain and testing and introducing innovative technologies to reduce costs. There are also opportunities in small scale projects where floating liquefaction is used to tap remote gas fields and unlock stranded resources. This also has the benefit of a quicker project delivery and is a low-cost concept. Floating Storage Regasification Units (FSRUs) also provide a quick solution to countries seeking entry into the market due to reasons such as an increasing gas demand or environmental requirements. Modularisation is continuously growing, as it offers a

benefit especially for remote projects achieving faster execution and avoids a large influx of workers to a small town for example. LNG project developers are increasingly seeing the benefits of better market analysis, as consultants carry out studies providing insight and some risk assessment. In 2019, five liquefaction projects have reached FID so far with a combined capacity of approximately 63 mtpa, which is almost double the capacity of FIDs reached between 2016-2018 combined. Mozambique for example is entering the market and developing projects which will could put it in a position to be one of the leaders in the LNG export market.

As LNG continues to grow in new markets like vessel bunkering partly due to the International Maritime Organisation's 2020 regulation to reduce sulphur limit in fuel oil to 0.5%, and countries diversifying their energy mix with gas, there is increasing competition amongst exporters for market share. The LNG market is becoming more liquid as there are more contracts without destination clauses, allowing tankers the flexibility of destinations other than the port specified. This has encouraged more trade, and one of the reasons for more spot activity and short-term contracts. LNG stakeholders must be willing to actively adapt and overcome challenges which will enable them to benefit from its success.

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