Gibson LNG Market Insight – March 2021
Overview of LNG in China

Introduction

LNG is playing an increasing role within the energy and transport sector within China and proving an area of expansion for the country's shipyards. This months Insight highlights LNGs role in Chinas ever developing economy.

Greening Transport

China is moving to improve its air quality and increase the use of cleaner fuels including LNG in the transport sector, with the application in trucks, industrial use and shipping. The government has issued a series of documents including the 'Implementation Plan on Domestic Emission Control Areas' in the waters of the Pearl River Delta, the Yangtze River Delta and the Bohai Sea Rim (Beijing, Tianjin, Hebei). This is augmented with the implementation of the IMO's 'Global Marine Fuel Oil Sulphur Limits' brought in at the start of 2020.

China has already expanded its emission control areas further along the coastal areas and the main river systems of the Yangtze and Xijang rivers, and introduced stricter control standards for waters in Hainan. Also there has been largescale switching from oil to LNG fuelled power stations producing electricity for various berths and container terminals within the country.

Pipeline versus LNG

In addition to the future increased use of LNG within the transport sector within the country, the national gas grid is steadily expanding. During 2020, 7.1 million households were connected to the network, increasing the country's gas demand for heating.

Whilst China already has significant pipeline connections with Turkmenistan and Russia, the political will is there to reduce air emissions by switching from high polluting thermal coal power to gas powered stations. This will require a wholesale move within the energy sector and raises questions about how the country can do this.

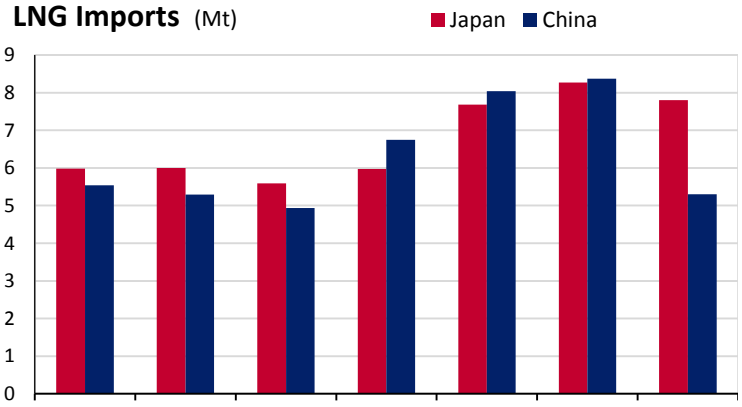
The Russian 'Power of Siberia' pipeline by all accounts has been a success, as the pipeline has slowly increased operational throughput to its 38 Bcm per annum contract with CNOOC. Such is China's demand for gas that a second 'Power of Siberia' pipeline is currently undergoing a feasibility study, with a route from Irkutsk across Mongolia to the Chinese border.

However, as both pipelines will enter China via the northern boarders with Russia and Mongolia, it is anticipated that the majority of the gas will be utilised within the northern provinces of the country. This is due the increase in costs of transporting gas via the Chinese pipeline network to regions further south such as the Yangtze River Delta. As such, tariffs from the Russian border to the northern city of Shenyang are reported to be around $1 per MMBtu, which makes gas from the Power of Siberia attractive. But to transport the gas further south to Shanghai will increase tariffs by around $3 per MMBtu. The movement of gas across the country is not particularly practical either, as the Yangtze River Delta has six LNG regasification terminals with a further three greenfield projects under construction and two more proposed.

Such is the demand within China, that both pipeline and LNG demand will continue to increase in tandem for the foreseeable future.

Winter Gas Demand

During 2020, LNG prices slumped to $1.85 per MMBtu due to the coronavirus pandemic demand contraction. As winter approached, demand started to return and spot LNG prices reached $29 per MMBtu on January 15, although there were reports that a number of cargoes were priced at $34 per MMBtu. There are a number of reasons for the dramatic price rise. Firstly, a harsher winter than was forecast in the Far East emerged, which meant extra demand for heating in the region. Secondly, there was competition between Chinese, Japanese and Korean buyers to secure cargoes, which had an inflationary aspect to prices. Also, liquefaction plants were starting to ramp-up after reducing production due to the pandemic. In addition to the above, China has limited natural gas storage as a percentage of annual demand at around 7%, compared with about 18% in Japan and 14% in South Korea and 25% across Europe. The extent of the winter buying spree can be seen below, where China purchased more LNG than Japan between November – January.



Source: Kpler

This relatively small storage capacity and China's increasing demand for gas means the country had less room to manoeuvre when the price of gas increase, as happened recently. The country had little choice but to pay the prevailing spot market prices. The country does have ambitious plans to build additional natural gas storage, with an aim to triple underground capacity from about 13 Bcm to 40 Bcm by 2030. This should help the second largest LNG importer have a buffer against demand-led spikes.

Chinese LNG Orderbook

The orderbook for LNGCs continues to expand, and will further increase as the sector awaits the approximate 110 large gas carriers for Qatargas, which are linked to their production expansion plans. China currently has 36 LNGCs on order, 34 of which are at the Hudong Zhonghua yard. This compares to 94 vessels on order across the various yards in South Korea, four in Japan and six in Russia.

Qatargas already has 23 LNGCs on order in China, some of which are linked to projects that the company is partnering with other companies. These confirmed vessels take employment for Hudong Zhonghua through to December 2027.

This is a huge boost for the Chinese shipyard and highlights the confidence that one of the largest LNG exporting companies has in the yards competence.

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