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THE NEXT WAVE OF CHINESE LNG IMPORTERS

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Many new and potential LNG importers have emerged in China, thanks to a combination of policy support and market fundamentals. Together, these new players present an important new source of LNG demand in the global market and significant opportunities for suppliers.

However, further reforms are needed to transform the current market structure and remove obstacles for these new players. What are the challenges facing new LNG importers? What is being done to release their full potential? How will international suppliers get familiar with them?

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Key implications¹

Chinese government policies allowing more players in wholesale natural gas supply had and will continue to affect the global LNG market. The country's three national oil companies (NOCs) have traditionally monopolized China's gas importing business, but this has changed.

- **The Chinese non-NOCs have been increasingly active in LNG importing activities. Several non-NOCs have procured new LNG supply agreements and** successfully imported cargoes. Many more companies are building or proposing new LNG receiving terminals.
- **Together, China's non-NOCs will provide significant opportunities for suppliers.** These companies vary from large end-users and citygas distributors seeking to minimize their gas procurement costs to energy companies looking for new market opportunities.
- **However, China will need to carry out further reforms to remove obstacles for these new players.** Allowing midstream access, removing barriers to downstream gas market, and reducing pricing regulations are critical steps toward realizing the full potential of China's domestic natural gas industry.

¹ China refers to mainland China in this report.

The NOCs dominate LNG import activities

The Chinese NOCs dominate China's LNG procurement activities. By the end of 2018, the NOCs operate 61.8 out of 71.0 million metric tons per annum (MMtpa) of existing LNG receiving capacity (see Figure 1). Only a handful of non-NOCs, Shenergy Group Company Limited (Shenergy), JOVO Group (JOVO), Guanghui Energy (Guanghui), and ENN Group (ENN), are operating LNG receiving terminals in China. Several local government-owned entities and private enterprises, including international companies such as BP and Pacific Oil and Gas, have minority ownership and little say in China's existing LNG receiving terminals.

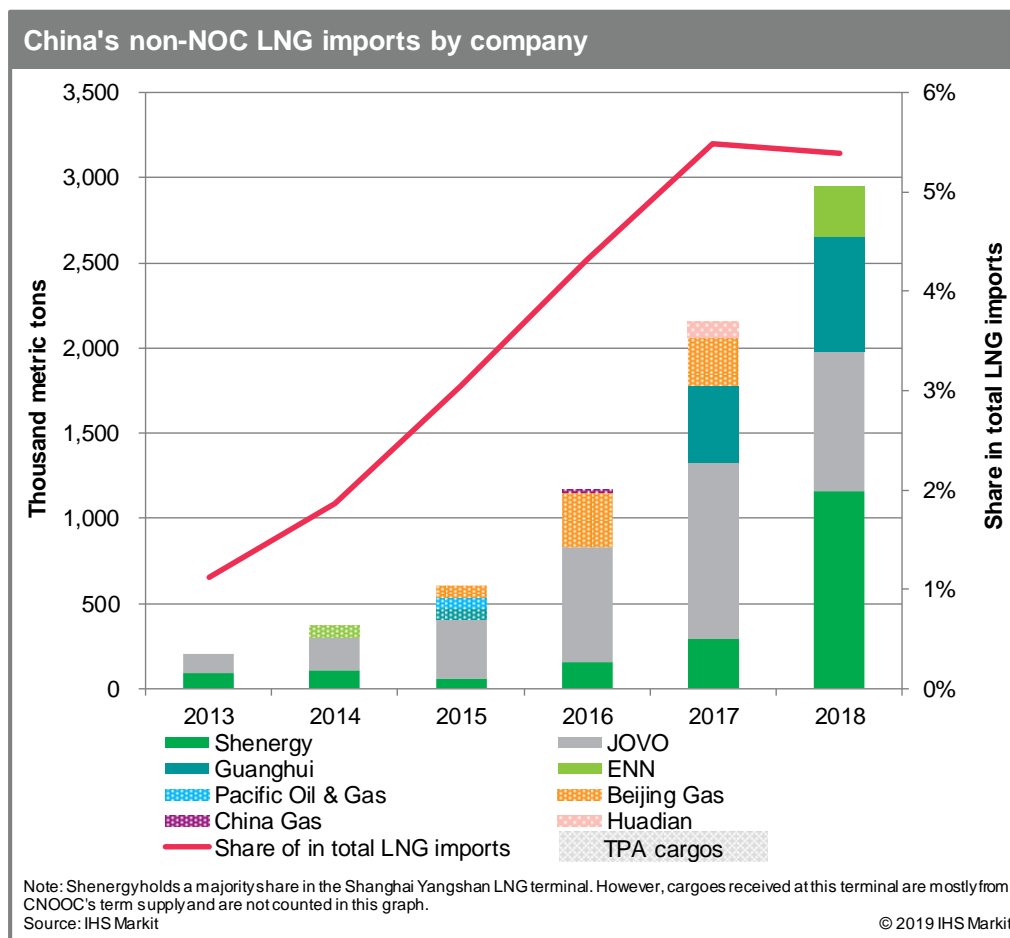
Figure 1.



More Chinese non-NOCs are keen to import LNG

The share of non-NOC LNG imports in national LNG imports remains low, but absolute volumes have steadily increased in the last five years (see Figure 2). This includes imports via non-NOCs owned terminals as well as cargoes via TPA.

Figure 2.



The rising LNG import volumes by non-NOCs reflect increasing interest in importing LNG, including developing and running LNG receiving terminals to capture the margin in the downstream market. By operating their own receiving terminals, non-NOC enterprises can make economically driven business decisions that weigh the revenue and profit against the cost of buying LNG from the global market. Furthermore, the Chinese NOCs play a dominant role in upstream, import activities, and midstream, putting domestic gas purchasers in a difficult bargaining position. Many potential LNG importers are looking for alternatives to procure their own gas supplies outside of the control of the NOCs.

Not under pressure for supply security like the NOCs, the non-NOCs target domestic premium gas markets by sector and by location. Unlike most gas sources in China that are sold at regulated gas prices, domestic LNG prices are determined by buyers and sellers. The niche market for non-NOCs includes gas users not yet connected to the gas grid or with curtailed supply during peak seasons, and therefore willing to pay a premium for gas, particularly in the coastal market with high affordability. In addition, gas also has cost advantage over oil in the transport sector.

Recent market developments open more opportunities to non-NOCs

Recent market reforms have prompted more active non-NOC participation in the LNG import business.

TPA policy for midstream gas infrastructure

Official government regulations have not been a significant impediment to non-NOC gas imports. Gas importers do not require particular licenses or quotas, which are in place for crude oil imports. In fact, natural gas importers simply need to file with the Ministry of Commerce before importing. The main challenge for non-NOCs is the lack of access to the necessary infrastructure required to import the gas, including regasification terminals and pipelines.

On 24 February 2014, the Chinese government announced a new regulation that opens oil and midstream gas infrastructure to TPA up to spare capacity level. This new policy applies to the oil and gas midstream, including LNG receiving terminals and pipelines.

Following the TPA policy, China National Petroleum Corporation (CNPC) has allowed TPA at all three of its LNG terminals for a number of contenders. The first TPA cargo came in August 2014 not too long after the policy announcement as Shenergy imported one 60,000 metric ton spot cargo from Malaysia through the Rudong terminal. The deal signifies that non-NOCs are interested in TPA and that the policy is indeed being implemented and serves as an operational model for future TPA agreements.

Mixed-ownership policy encouraging private capital in the gas sector

In November 2013, the Chinese Communist Party's 18th Central Committee issued its Third Plenum Decision documents, outlining a series of reform priorities. The new policies reflect the intention to allow market forces to play a more prominent role in the economy and to provide a more level playing field for all players.

The government's announcement signals a positive development toward a pathway for non-NOC participation in developing LNG import terminals. Since then, many non-NOCs, including foreign companies, have proposed LNG receiving terminals.

Gas supply security policies accelerate LNG terminal approval

Chinese gas market has mostly been supply constrained, especially during peak periods. Recent policies have increasingly focused on increasing supply capacity and securing supply over demand growth. Increasing storage capacity is the logical solution. However, the lack of access to depleted fields, financial subsidies, and pricing signals remains a challenge for China to solve storage capacity deficiency problem. An alternative is to raise LNG receiving capacity as an option to receive more supply from the global market. LNG imports have the advantage of arriving at the coastal demand centers and therefore not requiring long-distance transmission pipelines.

In early 2019, reports surfaced that the government is planning to almost quadruple the existing LNG receiving capacity to 247 MMtpa in 2035. The actual capacity development will hinge on demand growth. However, the plan reflects the important role of LNG imports and related infrastructure from the government's perspective and will help reserve land for LNG terminals use in the future. Accelerating terminal approval will likely follow.

Global LNG market fundamentals put downward pressure on LNG prices

A new wave of LNG projects globally has and will continue to compete for LNG offtake markets. The global LNG capacity rose by 83 MMtpa during 2016–18, up 30%. Over 93 MMtpa is already under construction. Furthermore, proposed liquefaction capacity has reached a historical high—870 MMt per year. As global LNG capacity ramps up, incremental LNG supply into China will likely be at a lower price than the series of contracts that China signed during 2008–14.

Non-NOC LNG importers include gas distributors, gas consumers, and companies looking for opportunities

The non-NOC LNG importers can be largely classified into three groups: gas distributors with existing distribution networks, large gas consumers, and companies looking for opportunities from the global LNG market.

Gas distribution companies

While large gas consumers are looking to procure LNG to meet their own gas needs, gas distribution companies also have access to downstream markets through their own distribution network. These companies are experienced in domestic gas markets and can target niche premium regions and sectors to maximize profit. Most existing non-NOC terminal operators fall into this category.

Shenergy—Yangshan and Wuhaohou LNG terminals, Shanghai

Shenergy is the dominant energy company in Shanghai, with dual focuses on both the gas and power sectors. The company owns 55% of and operates the 3.0 MMtpa Shanghai Yangshan terminal, though the terminal relies on CNOOC's LNG supply.

In addition, the company fully owns and operates Wuhaogou LNG peaking terminal—one of China's first domestic small-scale LNG peak-shaving plants. The terminal originally generated small amounts of LNG from domestic offshore gas for emergency supply. It added a berth, a LNG tank, and began importing LNG from abroad in 2008. This was China's first LNG import terminal owned by a non-NOC—although the owner of the terminal, Shenergy, is a state-owned enterprise owned by the Shanghai government.

Guanghui—Qidong LNG terminal, Jiangsu

Guanghui commissioned its 0.6 MMtpa terminal in Qidong, Jiangsu in June 2017. It is the second LNG receiving station in Jiangsu. The terminal lacks regasification facility and pipeline connection to transmission network and trucks imported LNG out in liquid form. The small storage capacity requires a fully loaded regular-sized vessel to discharge twice, with 10 days in between discharges to empty the tanks. Therefore, the terminal often splits cargoes with CNPC's Rudong terminal to reduce the total offloading time and cost.

The terminal has allowed multiple TPA cargoes. On the pipeline side, in December 2016, Guanghui reached a framework agreement for TPA to CNPC's West-East Pipeline (WEP) I, marking the first TPA agreement to a pipeline between an NOC and a non-NOC. Guanghui announced in January 2017 that it will invest in the 160 km Qi-Tong pipeline from Qidong terminal to connect to the WEP I and other direct-supply end users.

ENN—Zhoushan LNG terminal, Zhejiang

ENN is a citygas distribution company, ranking second in China by total natural gas sales in 2017 with 19.6 Bcm. The company has three Sale and Purchase Agreements (SPAs)—all signed within a short period of time—with Chevron, Total, and Origin, totaling 1.43 MMtpa. These agreements will provide supply to ENN's 3 MMtpa Zhoushan terminal—the first non-NOC terminal to receive approval from the National Development and Reform Commission (NDRC). The Phase 2 expansion will bring total capacity to 5 MMtpa in 2021.

A pipeline connecting Zhoushan's imported gas supplies with the provincial pipeline network is expected to come online by the end of 2019. Accessing Zhejiang's pipeline network has been difficult for ENN as Zheneng monopolizes the province's gas grid. After several rounds of negotiations, ENN agreed to sell its gas into the provincial grid and repurchase at the citygate for its distribution projects. Until the pipeline starts operation, the company trucks LNG out to reach downstream users.

In November 2018, ENN entered the US LNG market by acquiring Toshiba's American business unit for \$15 million. Toshiba will also pay ENN a one-time payment of \$821 million to take on its 20-year 2.2 MMtpa LNG purchase commitment from the Freeport LNG project in Texas. ENN will be able to import the volumes directly through its LNG receiving terminal or trade on the global market.

Other gas distributors

Other gas distributors with LNG import ambitions include Beijing Gas Group Co. Ltd. (Beijing Gas), owned by Beijing Enterprises Group Company Limited, Guangzhou Gas Group Co. Ltd. (Guangzhou Gas), and China Gas

Holdings Ltd. (China Gas). All three companies have signed initial framework agreements for LNG supply. Beijing Gas and Guangzhou Gas also have minor equity shares in existing LNG projects. Beijing Gas and China Gas have imported spot cargoes via TPA during winter periods.

Large gas consumers

Power generators are among the non-NOCs looking for LNG imports and proposing building their own receiving terminals. China Huadian Corporation (Huadian)—one of the “Big Five” power generators and Yudean—a local power generator—are known to have LNG import ambition. Huadian has the largest fleet of operating gas-fired power plants in the country, at 15 gigawatts (GW) by the end of 2018. The company has ambitious plans to increase its gas-fired installed capacity to 19 GW and 30 GW in 2020 and 2030, respectively.

Owing to limited gas supply availability and high generation cost, gas-fired power plants, including Huadian’s, have had relatively low utilization rates. Driven by the need to procure more gas for its own use and the desire to diversify its portfolio, Huadian has been looking at different routes to secure more gas supply. The company also proposed a number of options to receive LNG imports, including building its own LNG receiving terminals and using TPA to import LNG into existing ones.

Companies looking for new opportunities

JOVO—Dongguan LNG terminal, Guangdong

In 2013, two LNG cargoes from Malaysia, of 37,000 and 30,000 metric tons, respectively, arrived in Dongguan, Guangdong. The terminal, owned by the top Chinese private liquefied petroleum gas (LPG) distributor, JOVO, was previously an LPG terminal and now has an LNG handling capacity of 1 MMtpa and two 80,000 cubic meter LNG storage tanks. The 2013 imports made JOVO the first private entity to import LNG into China. Prior to receiving the Malaysian cargoes, the terminal had received several reloading cargoes from CNPC’s Dalian terminal in Liaoning.

JOVO became the first privately owned Chinese company to secure a term LNG supply deal in April 2014 with a 0.3 MMtpa SPA with Petronas. The company also has procured multiple spot purchases and preliminary term contracts with multiple LNG suppliers.

Others

Other non-NOCs like Sinoenergy, Beijing Energy, Baota Petrochemical, Hanas, Poly-GCL are also constructing or proposing LNG terminals. These are opportunistic developers, whose businesses are less relevant to gas supply and demand. These players will focus on small size terminals to start building their own markets.

Challenges remain for the non-NOCs to reach a large-scale market

Thus far, in addition to around 10 MMtpa already under construction, non-NOCs have proposed over 140 MMtpa of receiving capacity, more than all of China’s existing capacity. Nevertheless, many of these terminals are at very early stages of development with potential delay, and not all of them will go forward.

Pipeline access

A handful of non-NOCs have imported LNG via TPA or own terminals. However, the number of available slots is still limited, especially during winter period where demand and therefore domestic LNG prices are the highest.

In addition, and more importantly, TPA to the pipeline system has not been implemented, giving importers only two choices: selling the imported LNG to the pipeline operators—the NOCs, or trucking it out and sell it in liquid form, but the market size is limited.

The government has recently carried out midstream reforms. Transmission tariff reform has injected more transparency into tariff setting and reduced tariff level. This will accommodate future TPA to the pipeline system. However, the government has discussed for years the plan for a national pipeline company and pipeline TPA but yet finalized and implemented.

Pricing regulations and affordability

The government sets domestic gas prices low in order to stimulate demand. At the wholesale level, Shanghai citygate price—the highest in China—is only 2.06 yuan per cubic meter (equivalent to \$8.06/MMBtu assuming 6.78 yuan per US dollar exchange rate). There is also around \$1.5-1.7 additional value-added tax, terminal fee, and local transport for LNG imports to reach the wholesale market. This means that LNG imports sold in liquid form can only appeal to the transport sector who consumes gas in liquid form or gas users without adequate piped gas supply.

Despite the price deregulation policy for LNG imports, in reality, LNG imports sold into the pipeline system are typically at the regulated rates. This means that if the national pipeline company goes forward and TPA is established for the pipeline system, most LNG imports selling into the pipeline system will lose money at the current market pricing levels.

Downstream market access

Furthermore, although there are key markets that can absorb more gas, each individual non-NOC is relatively small compared with the NOCs. It will be a gradual process for the non-NOCs to independently establish downstream markets to push through large volumes of LNG imports. In addition, competition with the NOCs is risky given the unbalanced power between the two and that many non-NOC LNG importers still rely on NOCs' gas supply for different parts of their business, especially for inland citygas distribution projects.

Creditworthiness

The lack of credit required for large, long-term LNG deals is a big hurdle for most Chinese non-NOCs pursuing LNG supplies from the global market. Among the companies trying to get into the LNG importing business, only Huadian is a state-owned company and one of China's Big Five power generators. The rest are private companies, such as ENN and Guanghui. While many of the new and potential LNG importers are well known in the Chinese domestic market, they are relatively unknown in the global market. Their balance sheets are generally too small to successfully obtain the billion-dollar deals that are typical with medium- to long-term LNG supply contracts.

LNG industry experience

The NOC dominance in China's gas business means that very few other companies in China have accumulated experience in LNG imports, including building and operating LNG receiving terminals. Among the non-NOC LNG importers, ENN, Guanghui, and JOVO have accumulated expertise in the past couple of years in LNG procurements, including negotiating LNG contract terms and building and operating LNG terminals. Many other players can't claim the same. From the LNG supplier perspective, any disruptions to LNG buyers' ability to offtake contracted LNG will put suppliers' investments at risk.

Is there room for international companies to import and sell LNG in China?

None of the policies governing LNG imports explicitly forbid international companies from building receiving terminals and selling imported LNG into the domestic market. In fact, a few international companies already hold minority stakes in China's operating LNG terminals.

However, although many foreign companies have their own LNG supply, they do not have advantages over local companies in midstream and downstream operations. Successfully obtaining approvals at different government and agency levels to build an LNG receiving terminal in China is a complicated maneuver that requires deep political understanding.

Furthermore, once the imported LNG is received at the terminal, it needs to either be trucked or piped to the citygates or end users, once again requiring local downstream experience. Finally, foreign entities' importing and selling LNG in the domestic market will effectively become direct competitors with the NOCs, adding another layer of complication to the existing relationship in other business dealings.

Alternatively, it may be more practical for foreign companies to partner with a Chinese entity—especially one that has large gas demand or with an existing gas distribution network—in this business venture.

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