LNG Plays a More Crucial Role in China’s Gas Supply: LNG Import Outlook & Strategies

FENG Chenyue
Economist
CNPC Economics & Technology Research Institute
China's gas demand is growing rapidly

City gas, industrial gas and power generation are the main driving forces

Figure 1  China gas consumption volume and growth, 2000-2018
Source: China's National Bureau of Statistics; CNPC ETRI
The proportion of imported LNG continues to rise

Figure 2  China LNG import volume and growth, 2006-2018
Source: IHS Markit

- 2006: Began to import LNG
- 2010: Began to import pipeline gas
- 2017: Import reliance 45%
- 2018: Import reliance 45%
Chinese government continuously promotes liberalization of domestic gas industry

- **Upstream**
  - Opening entrance in LNG importing

- **Midstream**
  - Promoting TPA of gas infrastructure/strengthening pipeline rates regulation

- **Downstream**
  - Deregulation of domestic wholesale gas price
More Chinese companies are participating or increasing presence in LNG importing and trading

By the end of 2018, China had total regasification capacity of 70 MMTPA.
- CNOOC (51%)
- PetroChina (28%)
- Sinopec (13%).
- ENN Energy, Jovo Group and Xinjiang Guanghui Energy

Figure 3  Major LNG importers and their shares in China, 2018
Source: IHS Markit
Key factors that will influence China LNG import

- Industry and environment policies
- Pipeline gas import
- Gas price competitiveness
- LNG infrastructure
Outlook of China gas demand and supply

Gas demand and supply projection in 2020, 2025 and 2030
Gas import strategies: Diversification & Increasing flexibility

Europe
~50% import gas
• Diversify sources of supply
• A flexible power sector which can switch between coal and gas
• Active gas market and trading

Japan
~100% import gas
• Increasing upstream investment
• Cooperation among domestic buyers
• Cooperation with European buyers
Establishing a diversified gas supply mix is a key strategy to ensure energy security.

Sources of LNG import under signed contracts in 2020 and 2030
Source: IHS Markit
As a source of flexible marginal supply, U.S. LNG will create a cap for global LNG/gas prices

- Create a price cap for pipeline gas export to Europe
- Create a price cap for LNG from the Middle East and Asia Pacific to the Asian market

- U.S. is expected to become one of world’s top three LNG exporters in the next five years.
- In 2018, China imported 2.26 MMt of LNG from U.S., accounting for 4% of China's total LNG import.
Role of short-term/spot LNG in the supply mix

- China's spot LNG import in 2018 amounted to 18.6 MMt, twice the volume of 2017, accounting for 1/3 of China’s total LNG import.
- Using a flexible combination of long-term and short-term/spot purchase will be a key strategy for China LNG import.
- Long-term contracts ensure stable supply for long-term demand.
- Helps to establish cooperative partnership between sellers and buyers.
- Short-term and spot purchases improve flexibility of supply.
- High price fluctuations and procurement uncertainties.
Adopting proper and flexible pricing mechanism

- Globally accepted
- Hard to be manipulated
- Can be hedged and managed through financial markets
- Reasonable pricing formula and more flexible price review mechanism are needed

Oil-based pricing

HH-based pricing

The commoditization of LNG is accelerated. It is suggested to take advantage of the current loose market to develop Asia-Pacific LNG hub and benchmark price.

- Price competitiveness
- Likely large seasonal fluctuations
- Need to increase capabilities to manage such price fluctuations.
Key message

• China gas demand is of great potential, however the current strong growth will slow down during 2020–2030
• Diversification and increasing flexibility are key strategies
• Aspire a more liquid, flexible and transparent Asian LNG market with joint endeavor of buyers and sellers