How China’s LNG Market Will Evolve as More Infrastructure is Built

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China’s gas demand has grown quickly

Source: Wood Mackenzie China Gas & Power Service
N.B. Res & Comm = residential and commercial
China’s gas markets suffer a lot from infrastructure bottlenecks

**Bottlenecks**

**Regas terminals**
- geographical mismatch
- capacity shortage during winter

**Transmission pipelines**
- Pipeline imports reliant on Central Asia
- Insufficient inter-connectivity

**Peak-shaving capability**
- limited underground storage facilities
- limited tanks at terminals and cities
Surging gas demand has given LNG an edge over other supply options

Source: Wood Mackenzie China Gas & Power Service
Innovation in LNG logistics has helped partially overcome some of the challenges

How LNG is imported

- LNG vessel
- Cargo ship + Tank container

How LNG gets from terminals to end users

- Regasified and transported via pipelines
- Trucked in liquid form
- Via rail in liquid form

Bypasses terminal constraints
Bypasses pipeline constraints

Source: Wood Mackenzie China Gas & Power Service
LNG trucking has reached a significant scale in China

How LNG gets from terminals to downstream

How much gas demand is met by LNG trucking

Source: Wood Mackenzie China Gas & Power Service
Regas constraints will be gradually eased post-2020

Terminal capacity outlook

Source: Wood Mackenzie China Gas & Power Service
Note: On-going projects include projects operational, under construction and approved.
China can count on more pipeline import options in the near future

Pipeline import capacity

- **2018**: Power of Siberia (PoS) Line A & B expansion
- **Line D**
- **Far East**
- **Altai**
- **PoS expansion**

Source: Wood Mackenzie China Gas & Power Service
Pipeline imports will test the economics of LNG at coastal regions

Source: Wood Mackenzie China Gas & Power Service
Storage capacity will improve but will take years to reach the levels seen in mature markets

Source: Wood Mackenzie China Gas & Power Service

Target = Mid- to long-term plan of oil and gas grids targets to have over 30 bcm by 2025
Demand for LNG will grow to offer volume and flexibility

China gas supply long-term outlook

Key uncertainties

Source: Wood Mackenzie China Gas & Power Service
Implications for LNG market in China and globally

- Realising latent gas demand
- Reduced need for LNG trucking
- More balanced gas procurement
- Continued seasonality
- Increasing influence on global spot price

Source: Wood Mackenzie China Gas & Power Service