CHINA’S GAS MARKET

INVESTOR ROUNDTABLE

July 2020

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China gas supply mix - long-term outlook

Demand and sources of supply: trends to watch

Gas demand:
Where will demand growth be concentrated?

LNG imports:
How will China’s LNG import strategy develop?

Pipeline imports:
How will Power of Siberia change China’s market?

Unconventional gas production:
Will we witness a shale “boom” in China?

Conventional production:
Is China’s gas production growth sustainable?

Source: Wood Mackenzie

SATISFYING THE DEMAND BOOM RESTS ON DOMESTIC PRODUCTION AND IMPORT DEVELOPMENT
China's energy market and economy fundamentals will support consumption growth and strong demand for new pipeline supply from Russia.
DOMESTIC PRODUCTION. FRAGILE GROWTH

2020 crisis and its expected influence on China’s domestic production

- Despite a certain time-lag, China’s domestic gas production strongly correlates with global oil prices.
- When oil prices are stable and high, gas production in China shows strong growth, on occasion even reaching double digit figures.
- After the 2014 oil price collapse, China’s gas production growth rate dramatically decelerated, falling to negative numbers in the 3rd quarter of 2016.
- Following this pattern, the 2020 oil price collapse may lead to the decline in the production growth rate and further speed up the rise of import dependency.

Massive budget cuts announced by China’s NOC could lead to output growth rate slow-down and further increase import dependency

Sources: Wood Mackenzie, Thomson Reuters

*Overall budget cuts, not only upstream investment
China’s shale gas production outlook

- **Fact**: China's shale gas production (<15 bcm in 2019) satisfied about 5% of China's domestic gas demand.
- **13th FYP target (30 bcm by 2020)** is overly ambitious: 2020 production volumes will hardly reach 20 bcm. 2030 goals are even more “optimistic”: 2030 forecasts range – from 44 (bearish) to 57 (bullish) – reflects uncertainty about the prospects of the industry. The share of shale gas in China’s consumption might reach 8-11% by 2030.
- **Shale gas will be consumed locally (Sichuan province) and within Eastern China (Shanghai). These shale gas consuming regions only partly coincide with Russian pipeline gas target markets.**

Shale gas development in China: influence on Russian pipeline supply

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**Sources:** Wood Mackenzie, IHS Markit, Thomson Reuters, NDRC
PIPE IMPORTS. POWER OF SIBERIA: GAME-CHANGER

Power of Siberia (PoS) supply competitiveness (Q1 2020 China Customs data)

Local citygate gas price benchmark
Transport fee (regas for LNG*)
Production breakeven / China Customs border price Q1 2020**

Power of Siberia is a win-win for both buyer and seller

- Competitive oil-linked contract formula and short transport distance (compared to Central Asian gas) makes Power of Siberia (PoS) gas supply one of the most competitive import supply sources in all target regions: North-East, North (Beijing), East (Shanghai).

- According to China Customs data, in Q1 2020 PoS helped CNPC to “breakeven” in North-East and North (Beijing) region (no supply to Shanghai yet). This makes PoS one of the most desirable import sources for CNPC, who has been reporting losses on gas imports under legacy pipeline and LNG oil-linked contracts. A return on investment for Gazprom combined with no further losses for CNPC can be referred to as the so-called ‘golden mean’ of this deal.

- In 2019, PetroChina reported losses associated with gas imports ($4.4 bln total or ~$70 per 1000 cm; 23% higher than in 2018). Due to pricing regulations and the high cost of delivering imported gas to consumption centers, PetroChina has been unable to turn a profit on its import operations. This may change with the further development of pipeline imports from Russia.

Russian pipeline gas is the preferable import source for CNPC, guaranteeing high nominations and high utilization rate of the PoS pipeline

Sources: Wood Mackenzie, IHS Markit, Thomson Reuters, China Customs

*In case of LNG no distribution fee included
**JKM average in Q1 2020 for LNG (spot)
LNG IMPORTS. GROWING EXPOSURE TO SPOT

While exposure to volatile LNG market grows, Chinese buyers will need a more stable pipe supply as a baseload.

China’s LNG procurement strategy and midstream reform

- China’s LNG average landed price, mainly based on long-term contracts, effectively ‘smoothed out the peaks and troughs’ of Asian spot price (JKM) volatility in 2015-2018.

- However, against the backdrop of the Asian spot prices meltdown since 2018, the differential between average LNG landed prices and Asian spot prices dramatically increased to the level of up to $5/MMBtu in 2020.

- In response to the spot price decrease, Chinese buyers have stepped-up spot purchases, whose share has raised from 10-20% in 2015-2016 to the level of 30-40% of LNG imports in 2020. China is expected to continue to intensify spot purchases as long-term contracts expire.

- In the future, China will be even more exposed to LNG market volatility as midstream reform unveils and new buyers with small LNG portfolio increase their activity in the LNG market both through their own terminals and PipeChina infrastructure.

Sources: Wood Mackenzie, IHS Markit, Thomson Reuters  

LNG terminals development forecast

New importers  
PipeChina  

2015  2020*  2025  
*As beginning of 2020, speculative
GAZPROM’S PIPELINE EXPORTS ARE EXPECTED TO BECOME A MAJOR NEW SUPPLY SOURCE TO THE FAST-GROWING CHINA’S MARKET

CHINA GAS MARKET OUTLOOK. CONCLUSIONS

Gas demand: PoS target markets to become centers of demand growth

LNG imports: China will be more exposed to volatile spot market

Pipeline imports: PoS to become win-win project for Gazprom and CNPC

Unconventional gas production: Shale development will barely influence supply balance

Conventional production: Output growth rate may decline due to external factors
THANKS FOR YOUR ATTENTION