

Central Asian gas in an evolving global market

Ashley Sherman, Principal Research Analyst

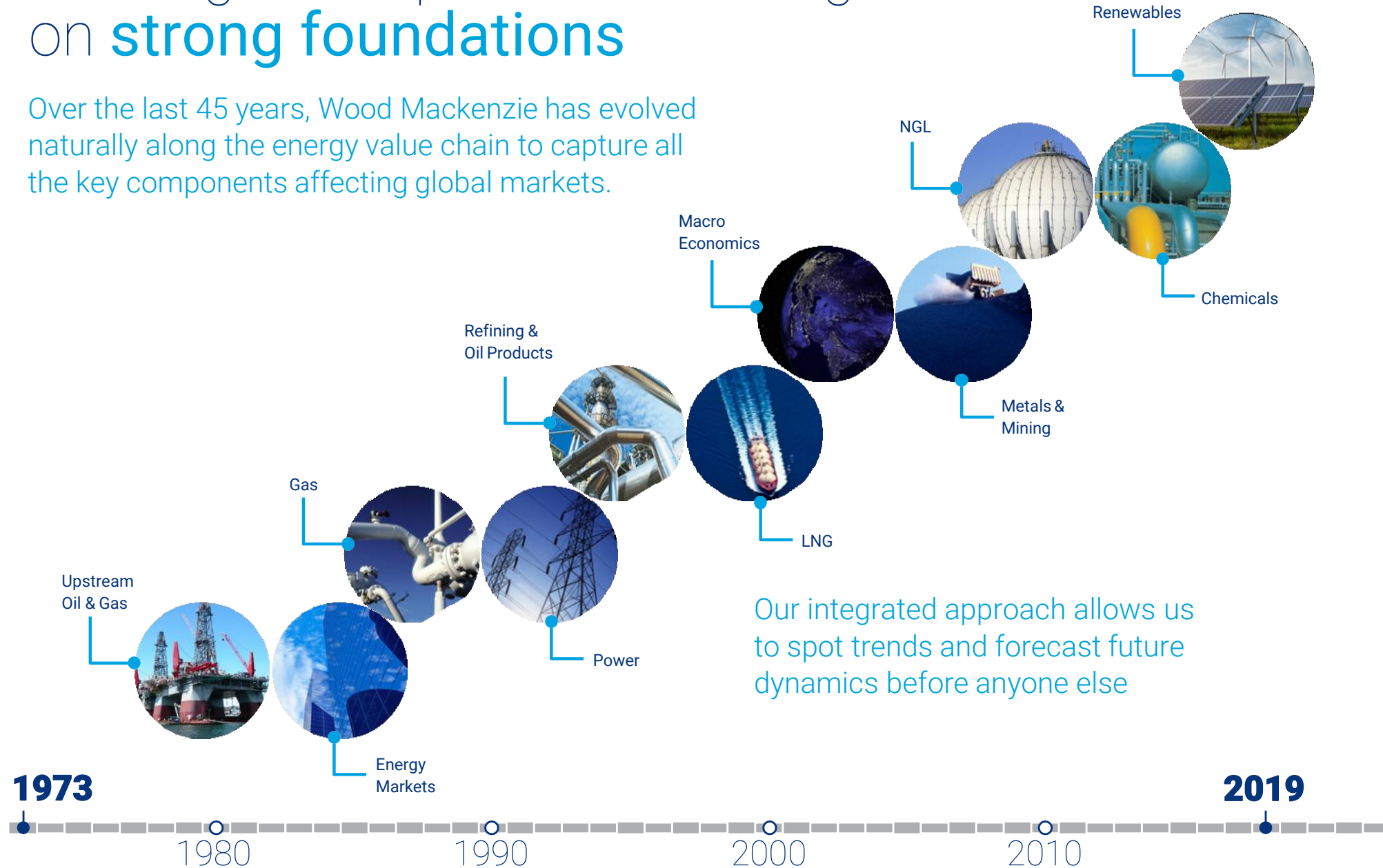
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Building a competitive advantage on **strong foundations**

Over the last 45 years, Wood Mackenzie has evolved naturally along the energy value chain to capture all the key components affecting global markets.

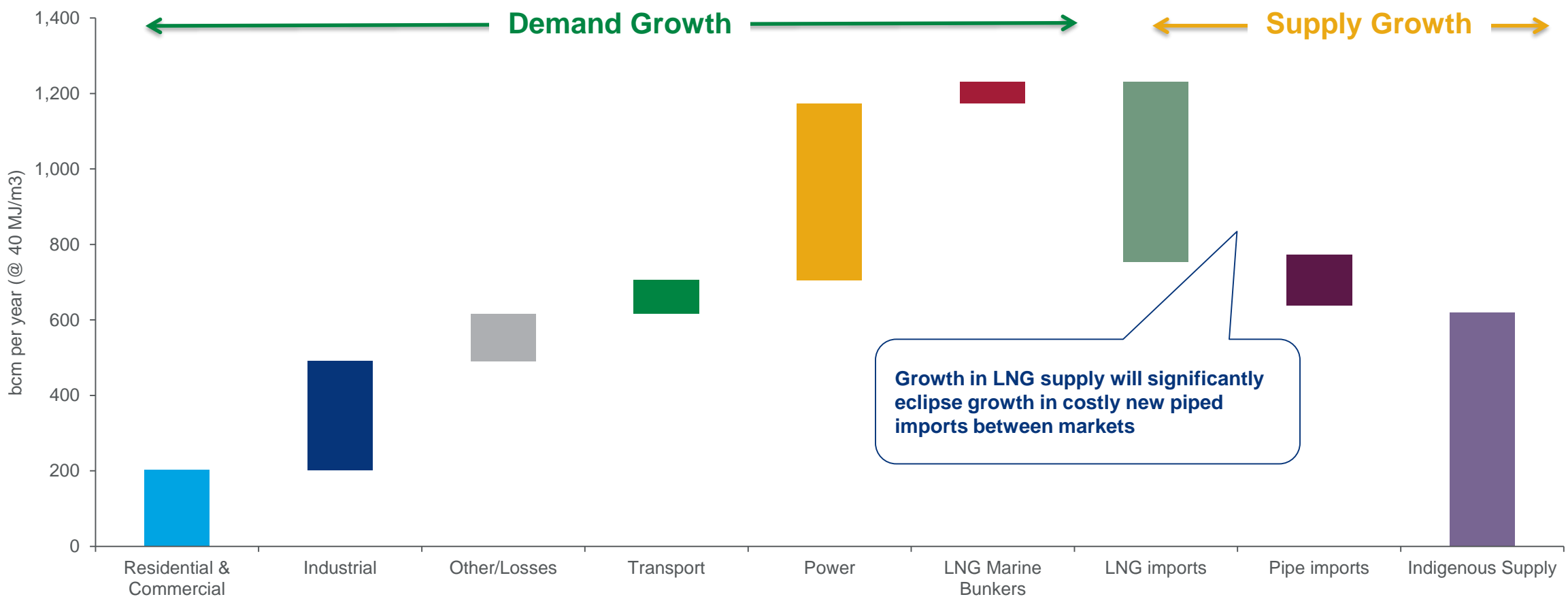


Our integrated approach allows us to spot trends and forecast future dynamics before anyone else

Global gas demand will increase by more than 30% to 2040

Despite the relentless rise of renewables, significant long-term gas growth is expected...

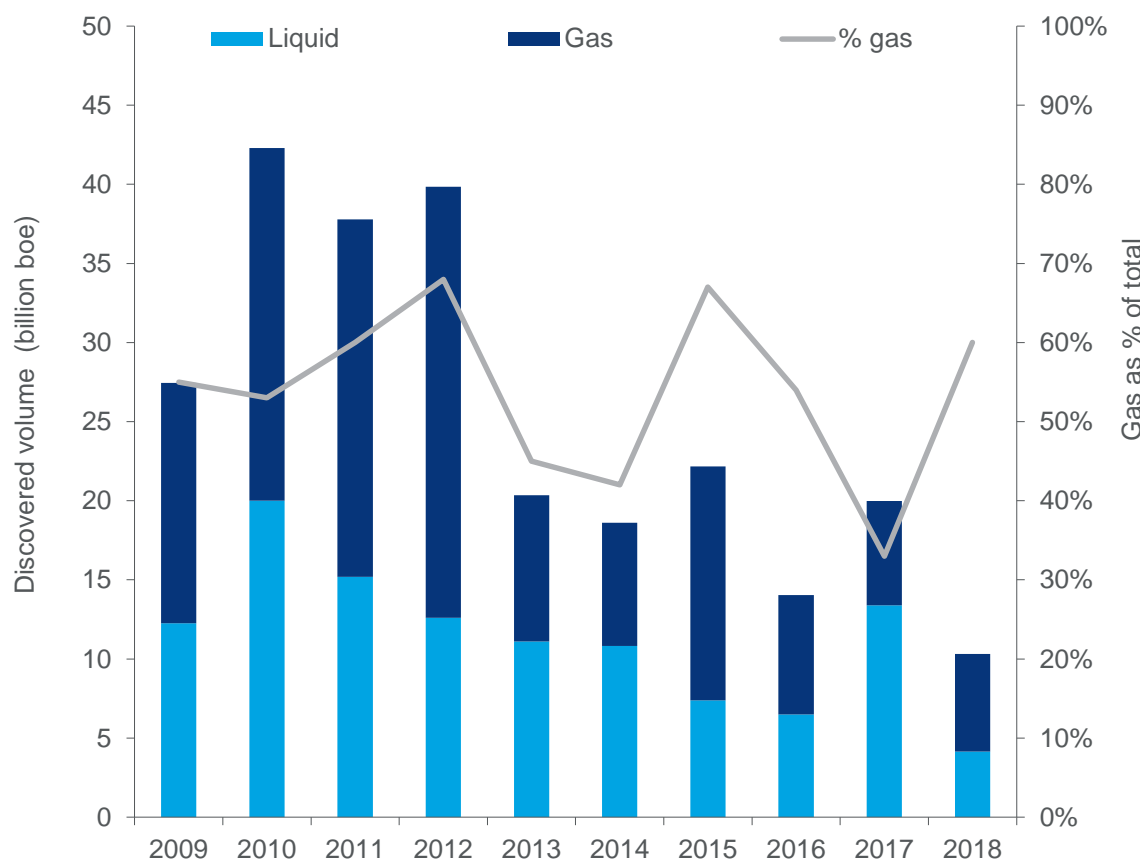
Global gas outlook, 2020 to 2040



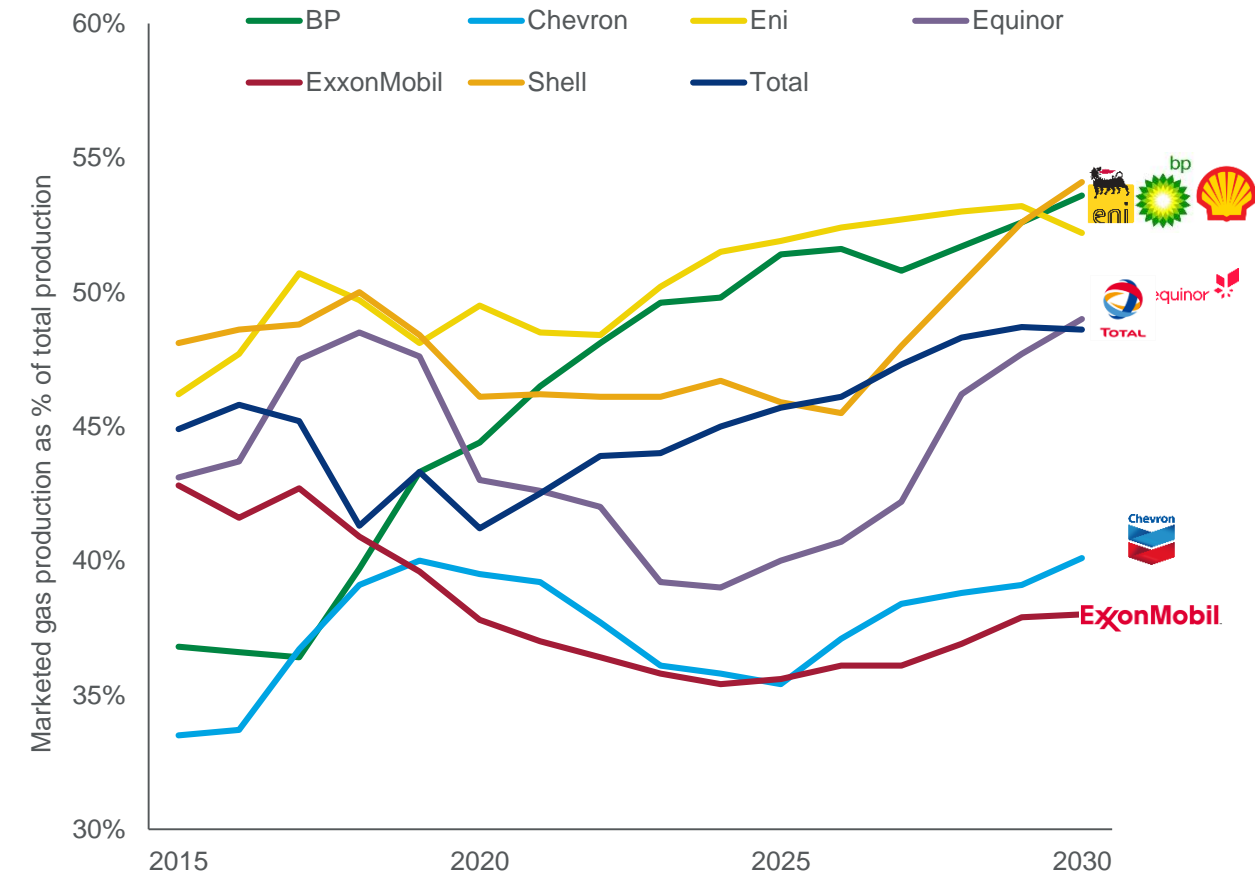
Is there a shift towards gas in the industry?

Opinion divided on gas as a 'bridge' to zero-carbon future or a sustained long-term focus...

New field oil and gas volumes



Majors' gas production as % of total

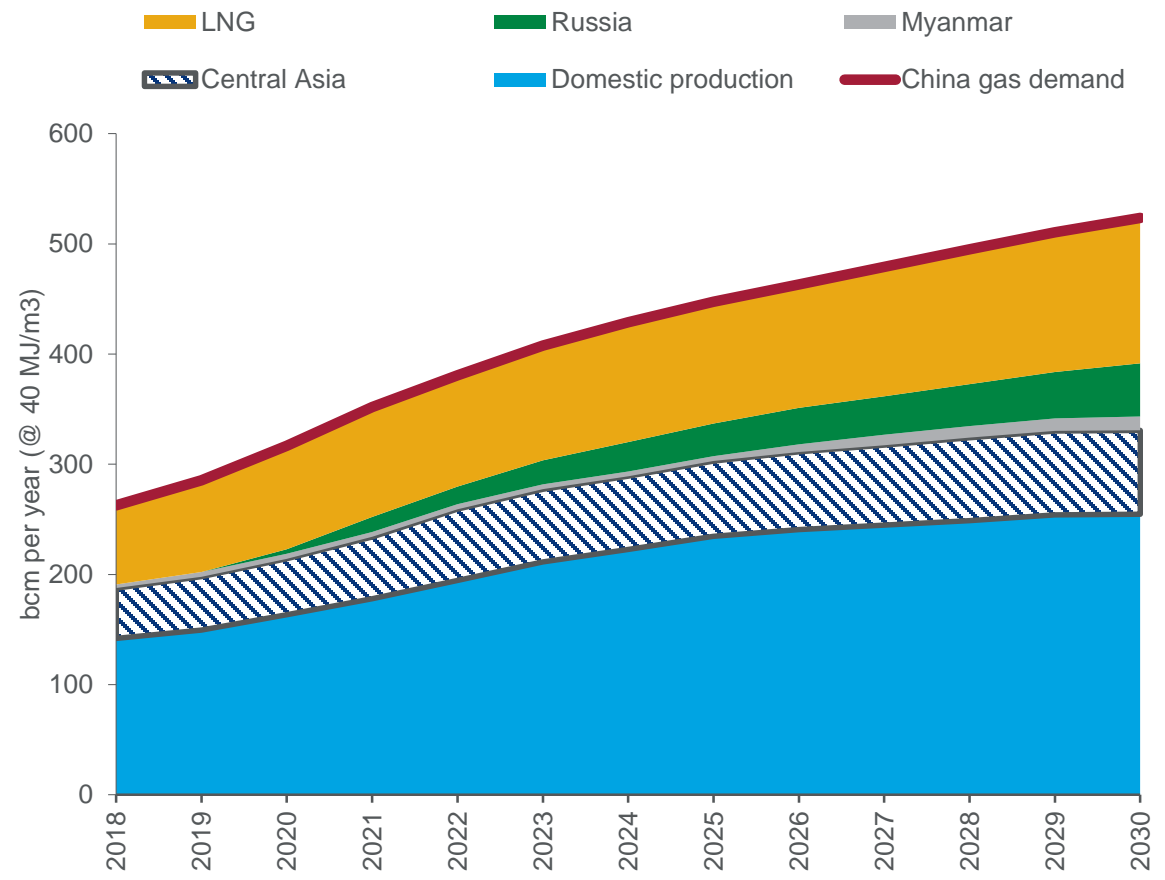


Source: Wood Mackenzie Exploration Service and Corporate Benchmarking Tool

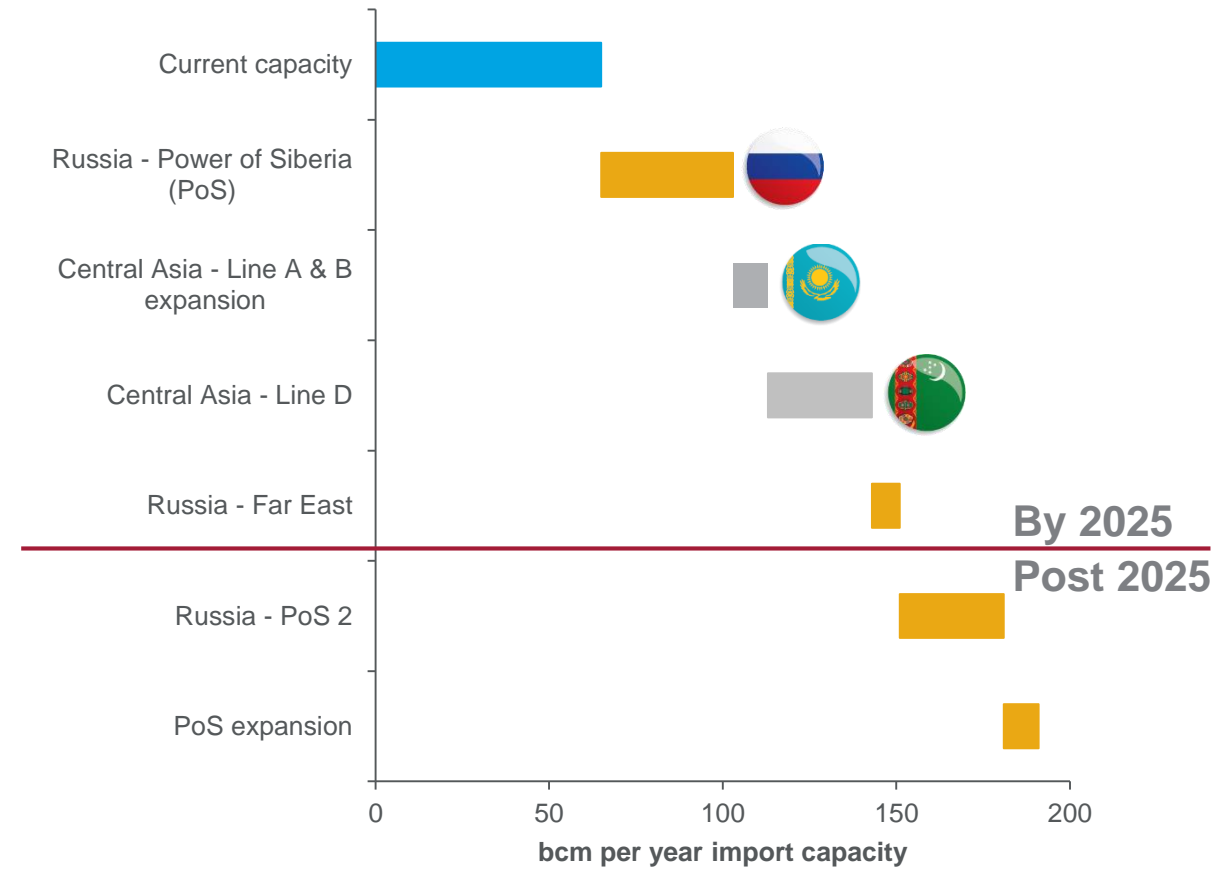
China's post-2020 supply – competition between LNG, piped imports and domestic output

Gas demand forecasted to double by 2030, but range of uncertainties await...

China gas supply mix



China gas pipeline import capacity

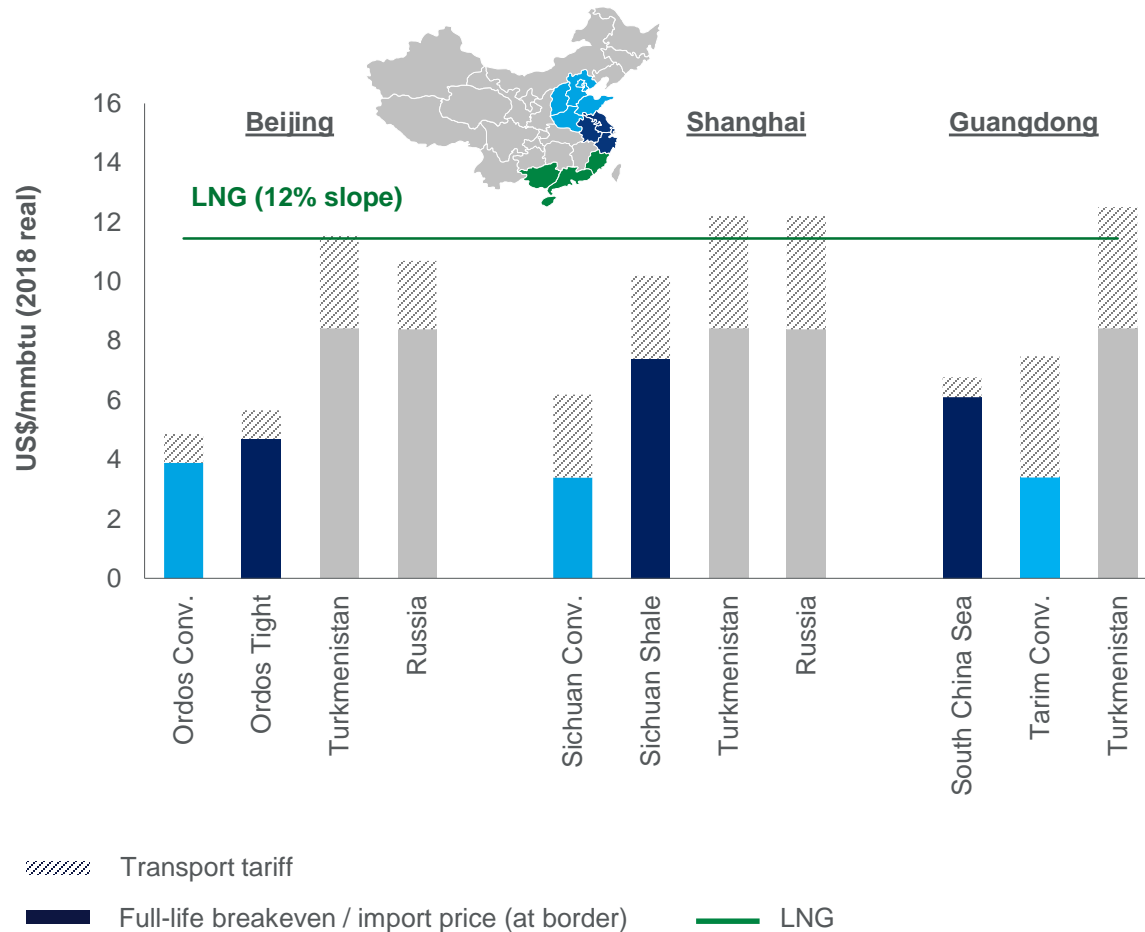


Source: Wood Mackenzie Global Gas Service and China Gas & Power Service (H1 2019 outlook)

Central Asia gas's competitive disadvantage in China's core demand areas

Less flexible / seasonal than LNG and burdened with west-east China transportation costs...

Cost of new supply into China's coastal regions



Key uncertainties



Pace of gas demand creation



Pace and scale of China's shale gas growth



China's gas storage capacity growth

Source: Wood Mackenzie China Gas & Power Service.
 Conv = conventional. Production cost = full-life breakeven, or landed cost at China border.
 LNG includes VAT and regas and transport cost.

Key themes for Kazakh gas?



Unlocking gas sales growth, not just production growth



Fixing the upstream economics of associated and non-associated gas

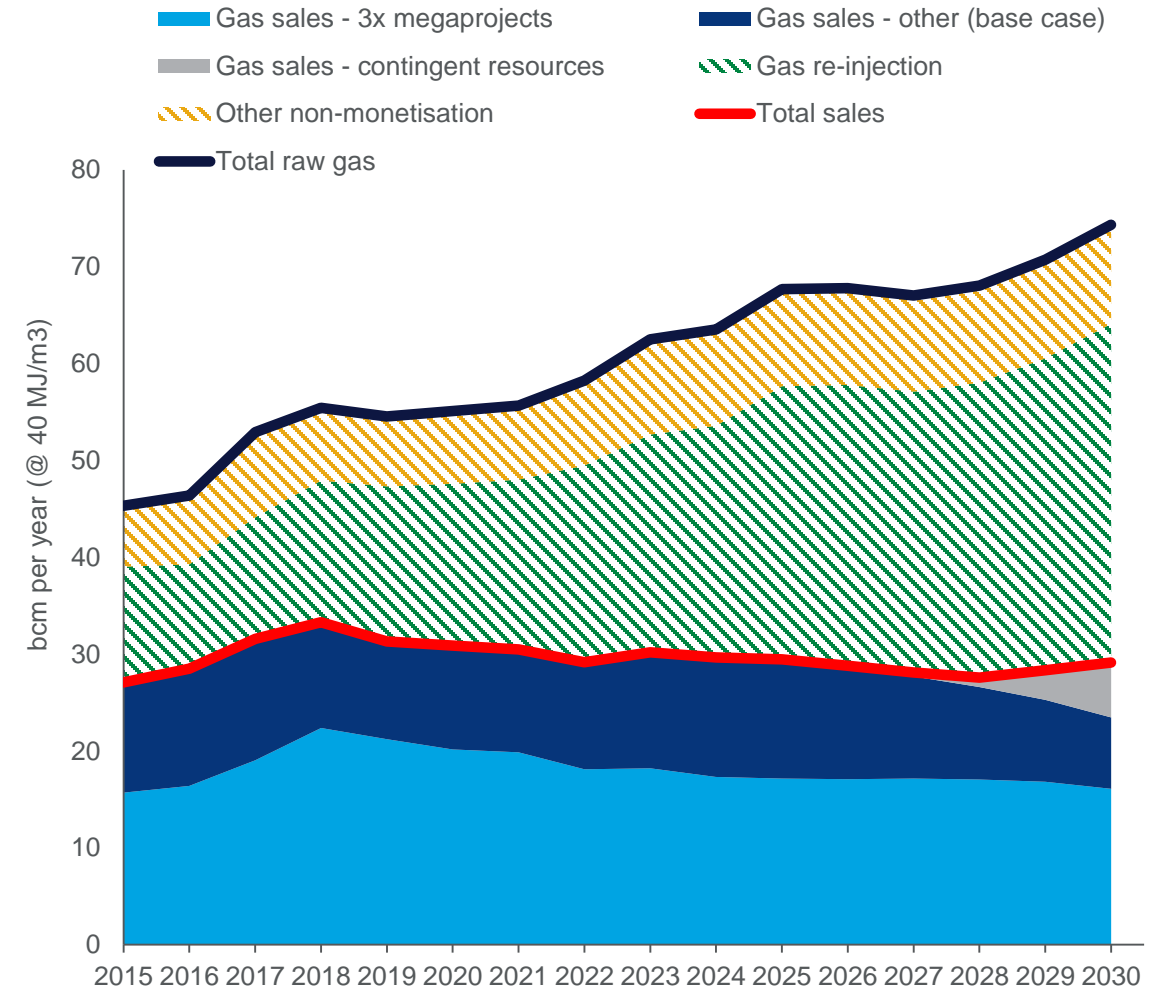


Maximising use of existing processing infrastructure



Benefitting from existing sour gas expertise

Kazakhstan gas outlook





Ashley Sherman

Principal Research Analyst – Caspian & Europe Upstream

Biography

Ashley joined Wood Mackenzie in 2012 and works as the Principal Research Analyst for Caspian & Europe Upstream.

He leads Wood Mackenzie's commercial and strategic analysis of the energy sector in the Caspian and Continental Europe regions, supporting the company's global client base. He is a regular visitor to the Caspian region and a frequent speaker at industry conferences.

He was previously an Analyst in the Oil & Gas team at an emerging markets-focused investment bank.

In 2012, he completed an MSc in International Public Policy at University College London, with his dissertation focused on unconventional gas development in China.

In 2010, Ashley graduated from Oxford University with a degree in Russian and French.

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