



Medium-Term Gas Market Report 2023

Gergely MOLNAR, Gas Analyst

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IEA Medium-Term Gas Report 2023

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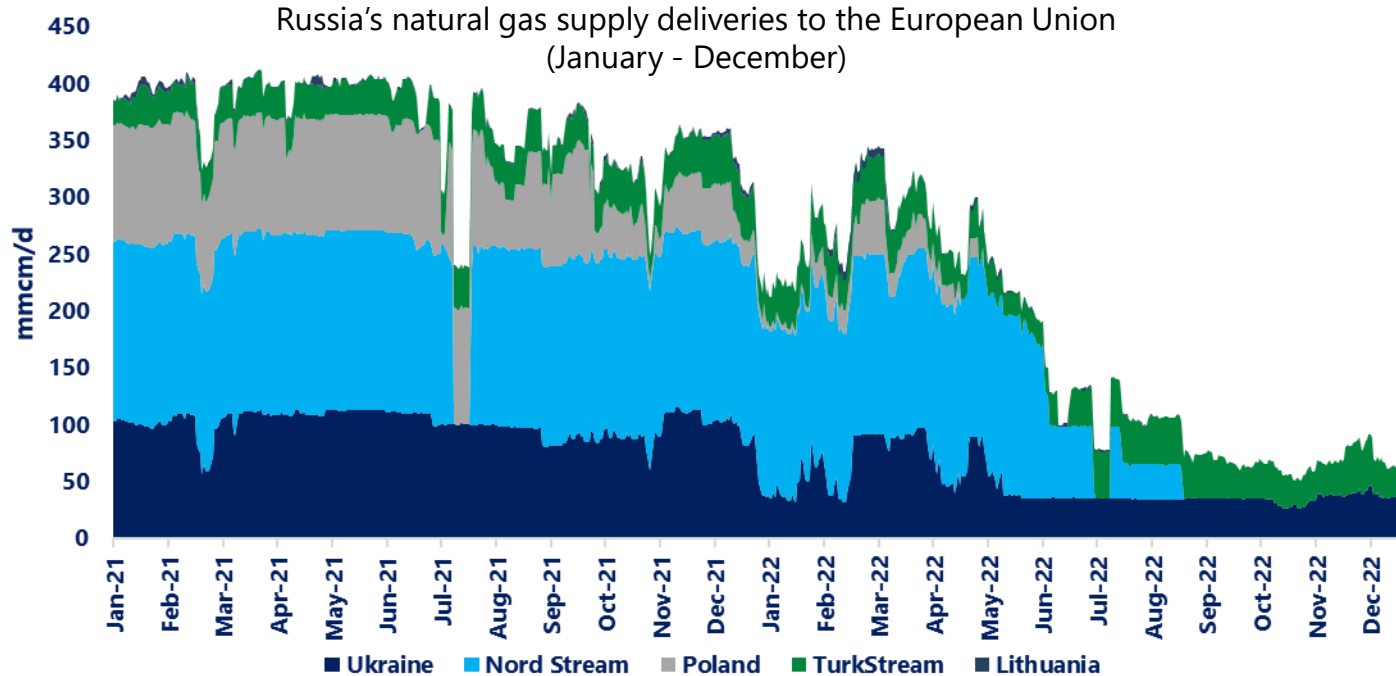
Including the Gas Market Report, Q4-2023



<https://www.iea.org/reports/medium-term-gas-report-2023>

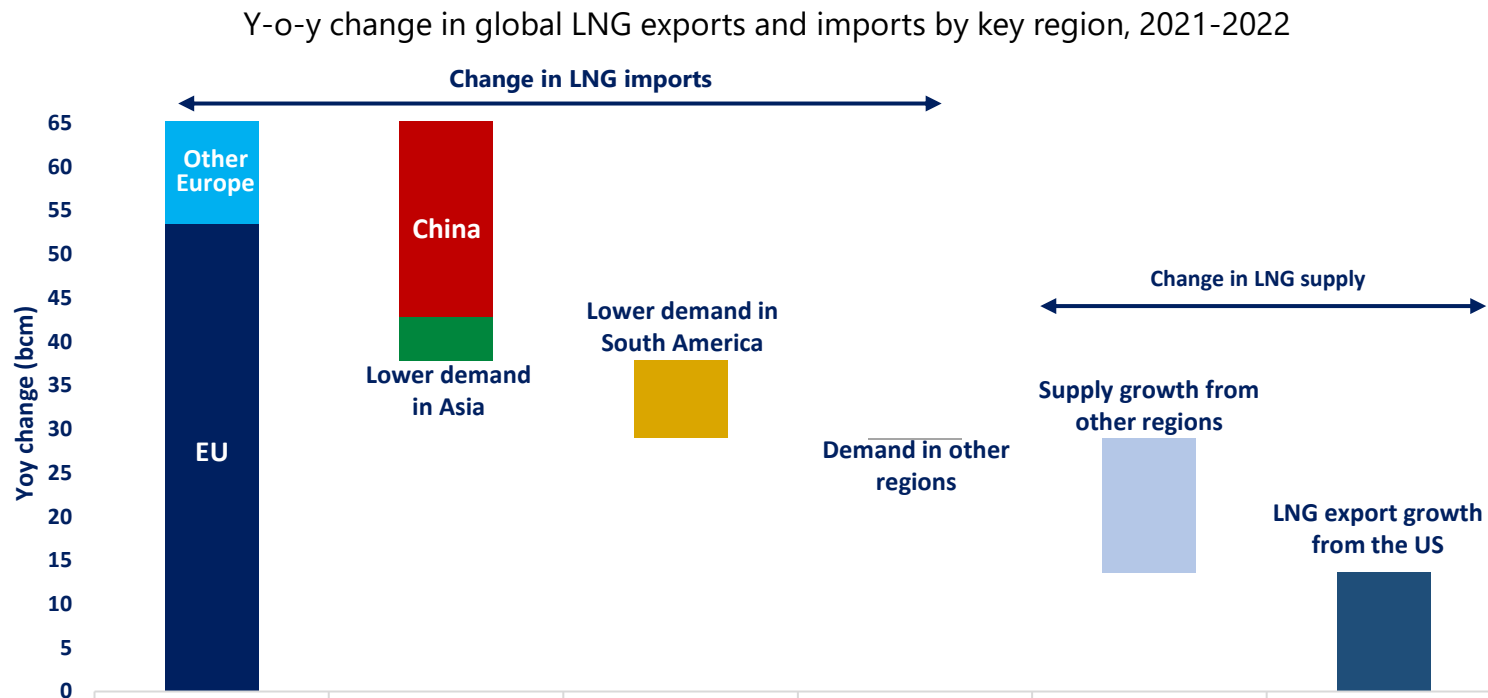
Recent market trends

The gas supply shock of 2022...



Russia more than halved its piped gas supplies to the European Union in 2022, putting an unprecedented pressure both on the European and global gas markets.

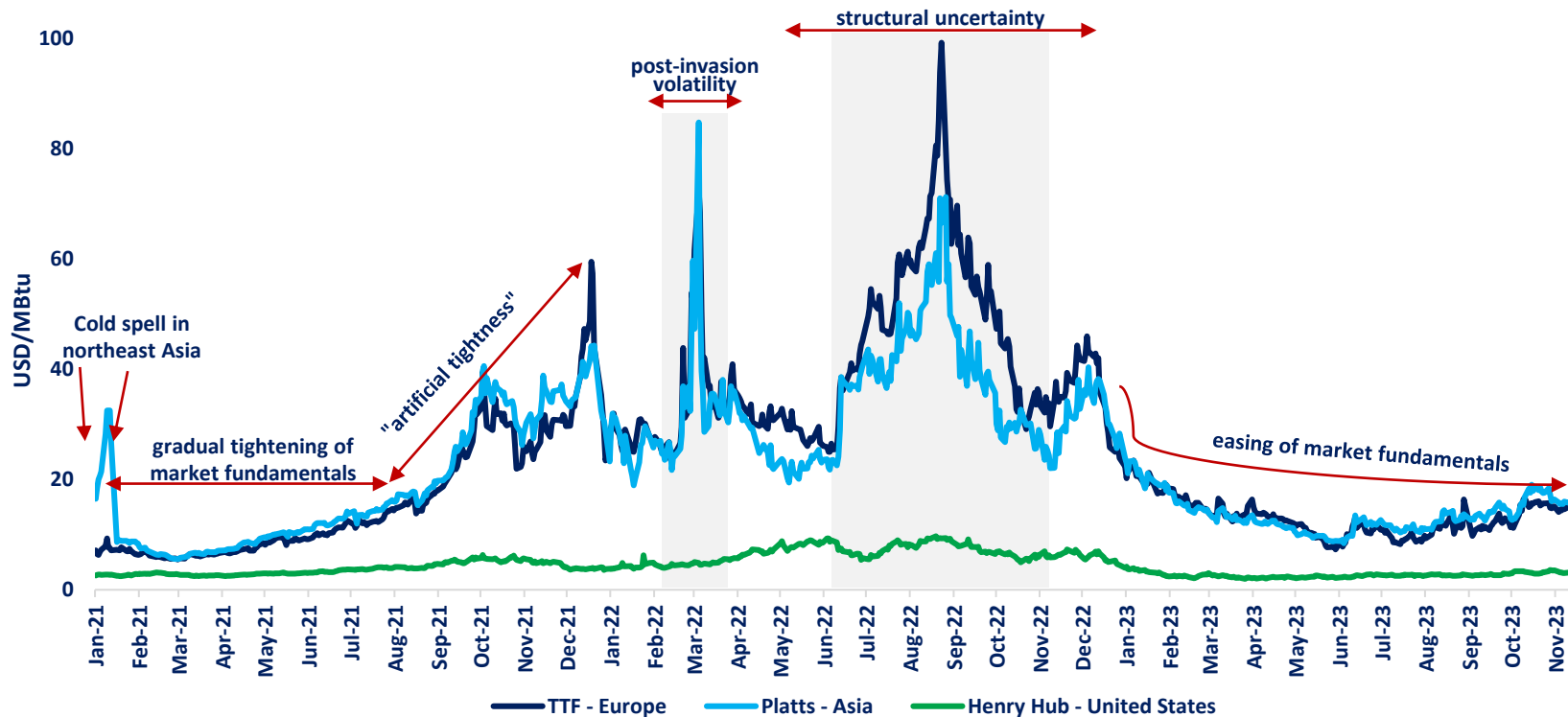
...led to a profound reconfiguration of LNG flows



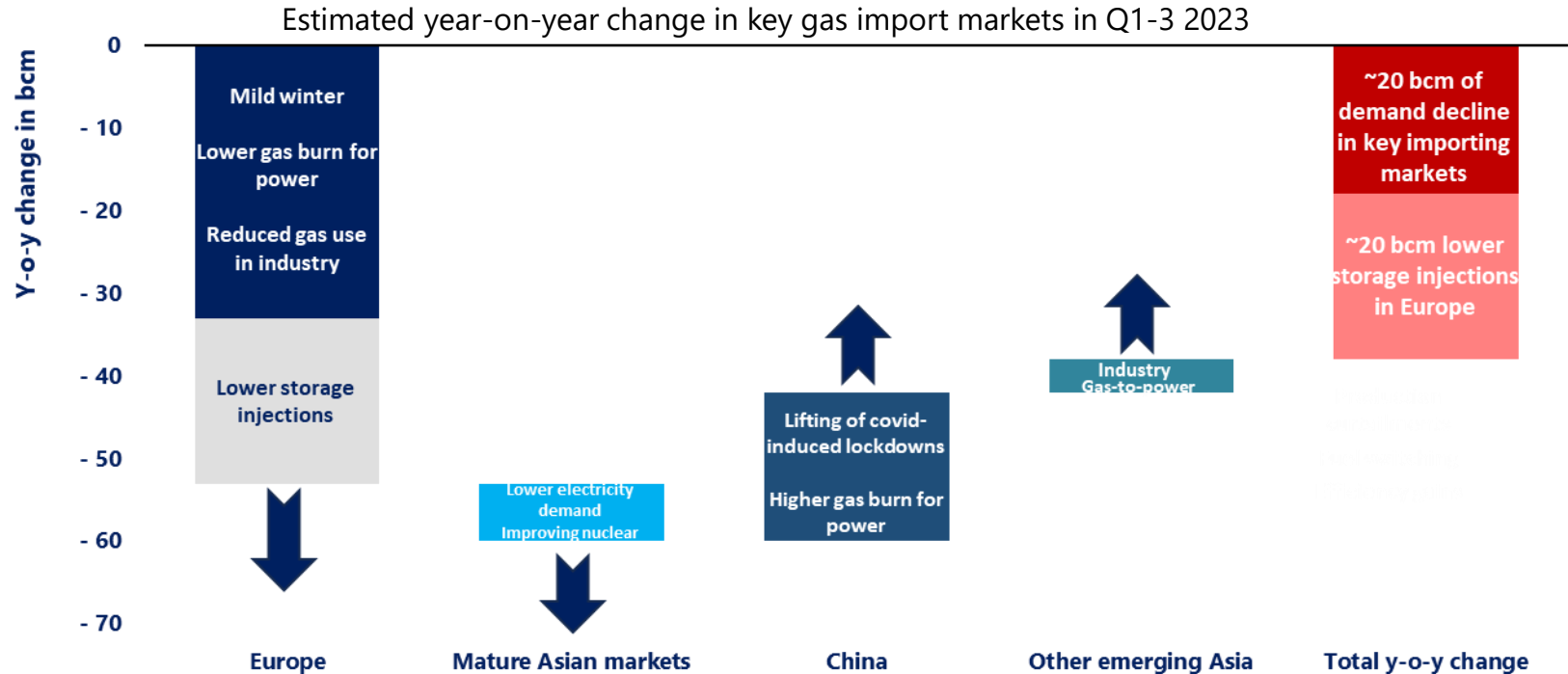
The 2022 gas supply shock led to a readjustment of global LNG flows: while European LNG imports increased by 60% in 2022, Asian LNG imports declined by 7%, primarily driven by lower inflows to China.

Market tensions moderated significantly since their 2022 highs

TTF and Asian spot LNG prices (2021-2023)

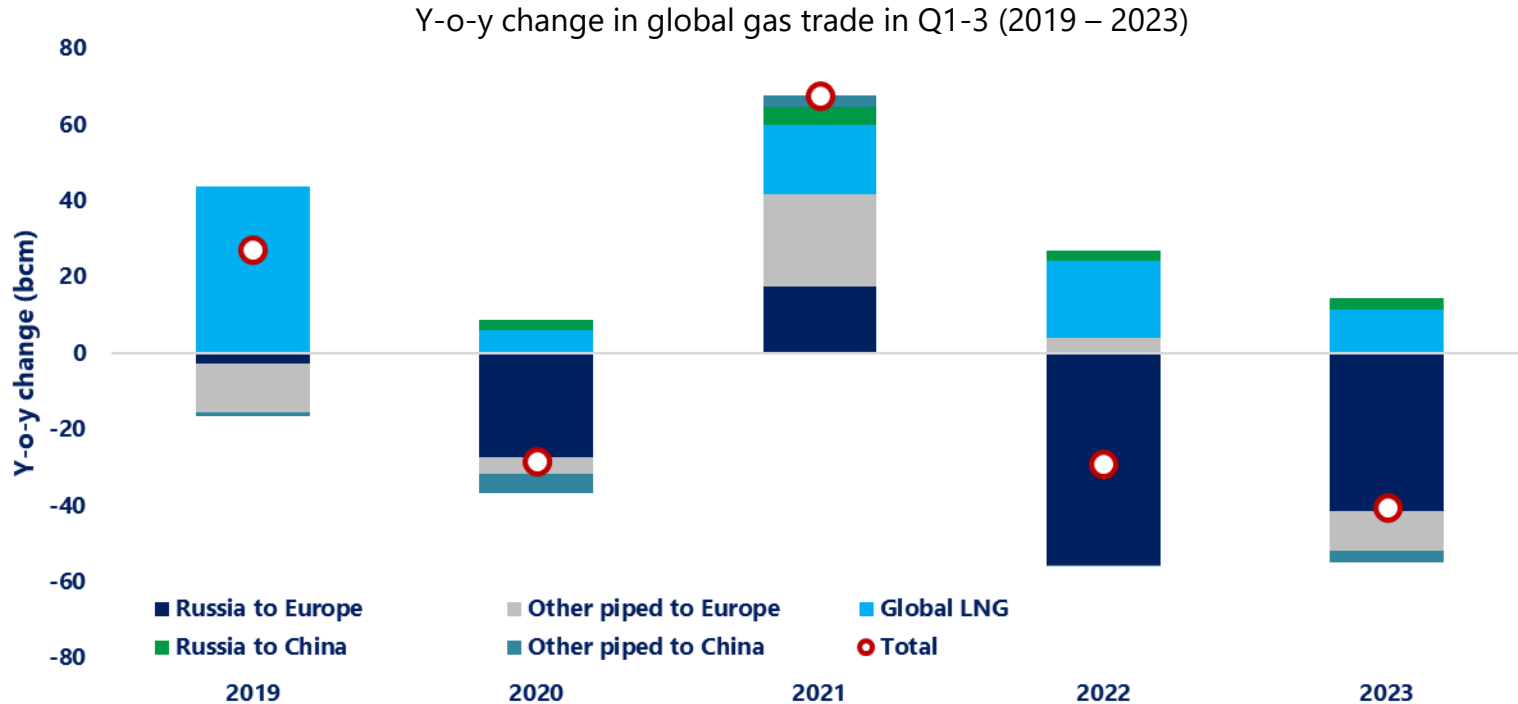


The demand side played a key role in moderating market tensions...



Demand growth in China and emerging Asian markets was more than offset by the demand reductions in Europe and the mature markets of Asia, which in turned eased market tensions in Q1-3 2023.

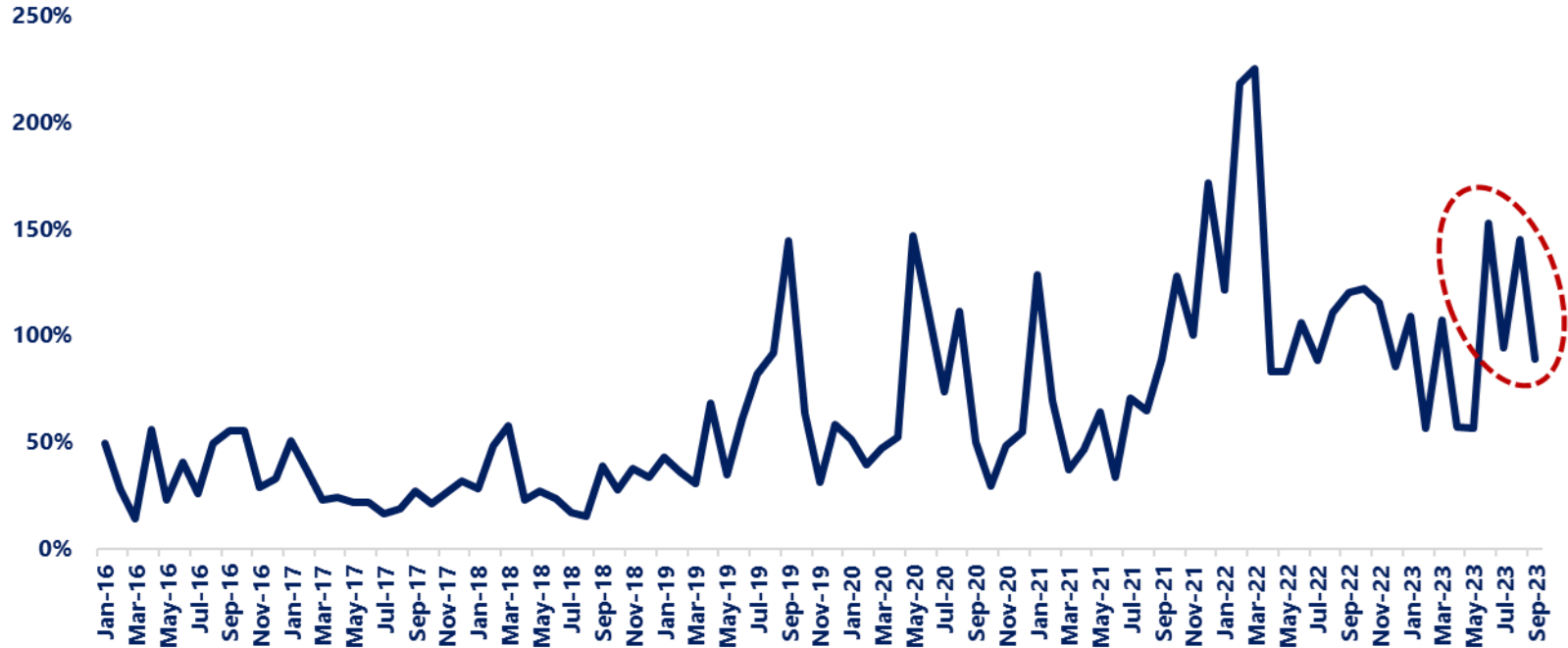
...but natural gas supply remains tight...



Natural gas supply continued to tighten through Q1-3 2023, as the modest increase in global LNG supply was not sufficient to counterbalance the steep decline in Russian piped gas deliveries to Europe.

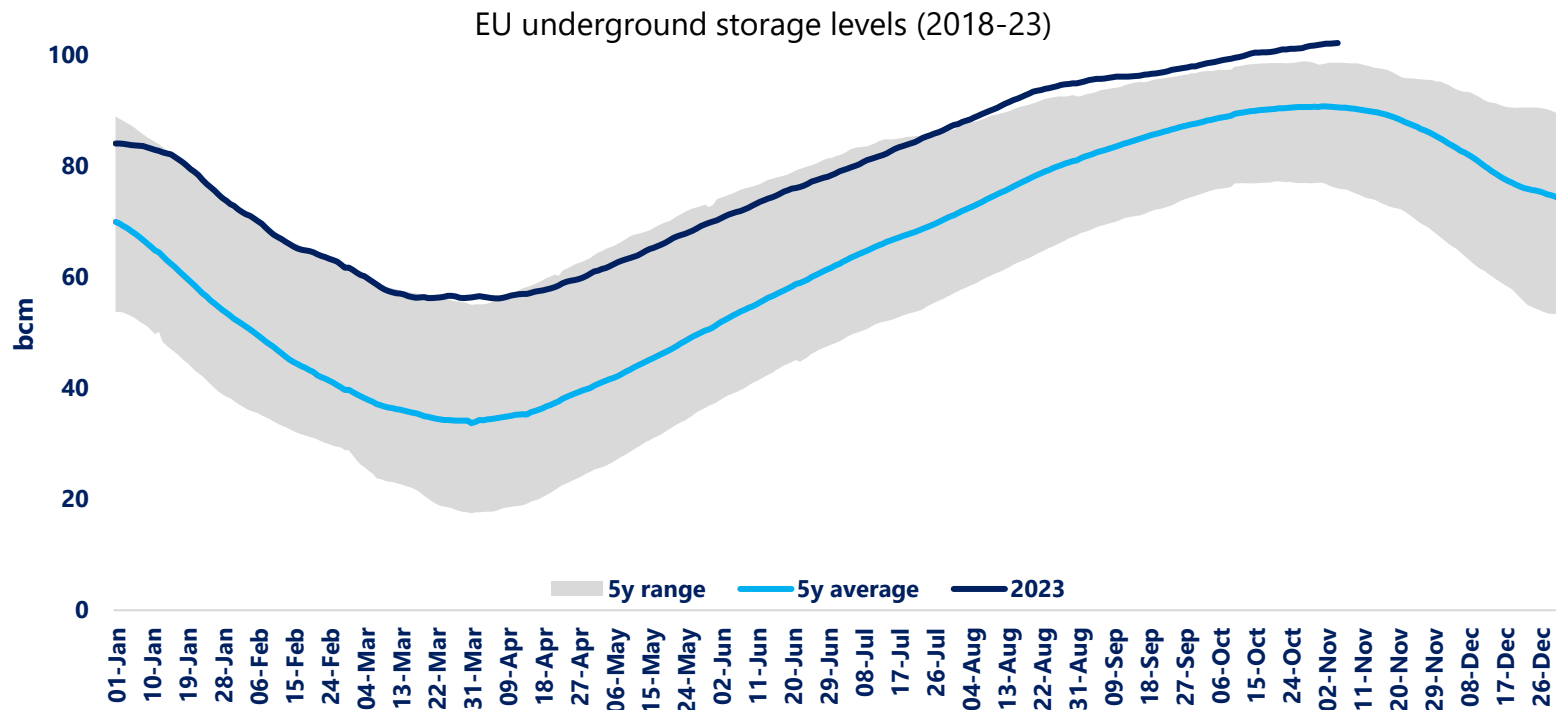
...and price volatility remains elevated

Evolution of monthly TTF MA historical volatility (annualised basis), 2016-2023



TTF price volatility in August 2023 reached its highest level since Russia's invasion of Ukraine.

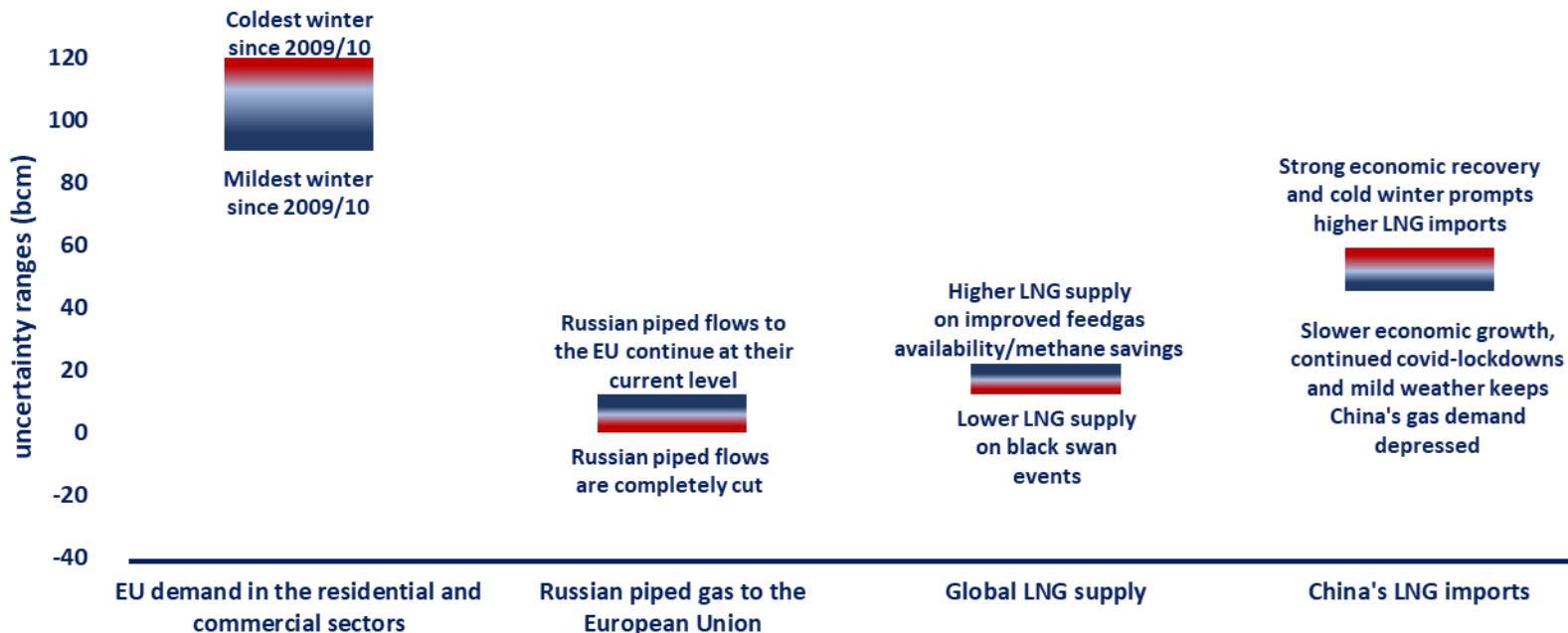
EU storage sites reached 100% fill levels ahead of 2023/24 winter



Lower demand together with healthy LNG inflow allowed the European Union to fill up its storage sites to close to 100% of working capacity ahead of the 2023/24 heating season.

Risks and uncertainties remain ahead of the 2023/24 winter

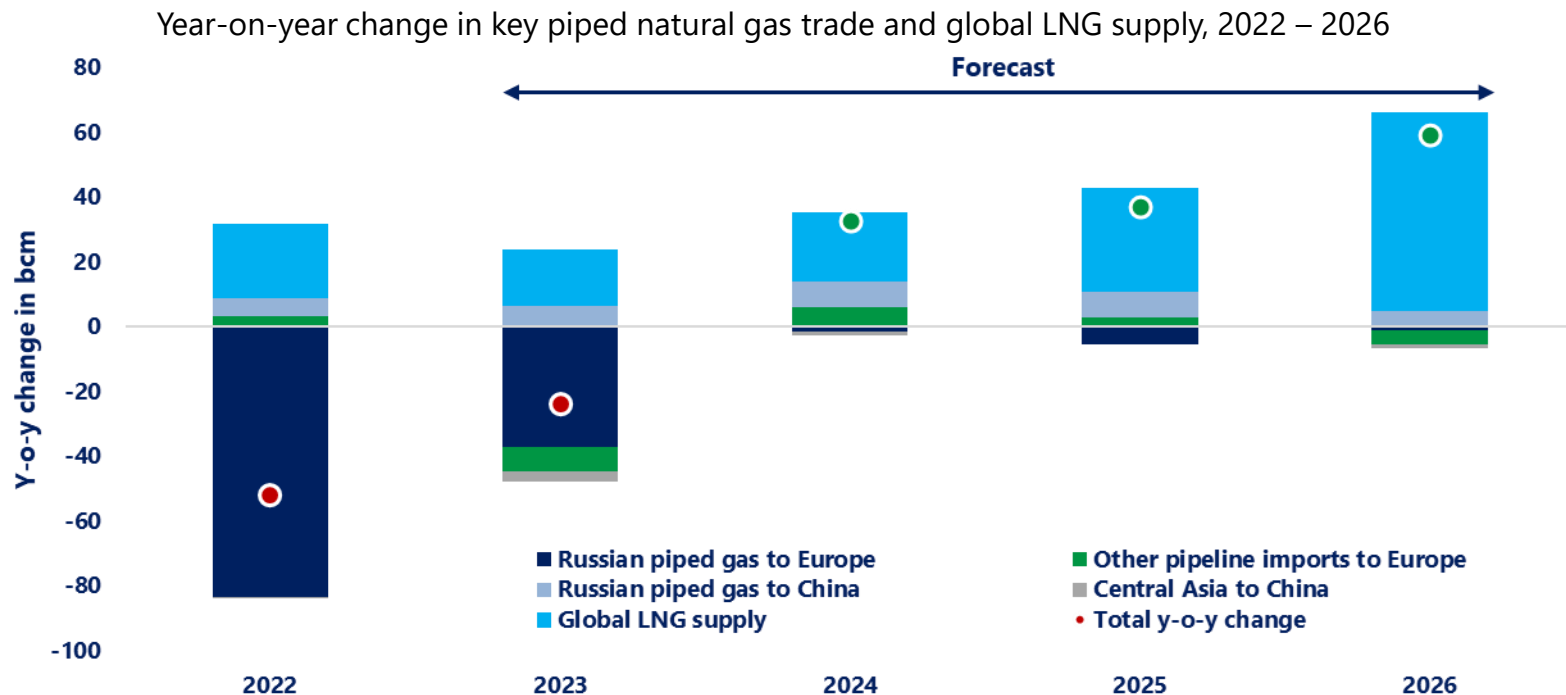
Uncertainty ranges of key exogenous risks to the European and global gas balance for the 2023/24 heating season



The global and European natural gas balance is subject to an unusually wide range of risks ahead of the 2023/24 winter. If not mitigated through proper policies, we could see renewed market tensions.

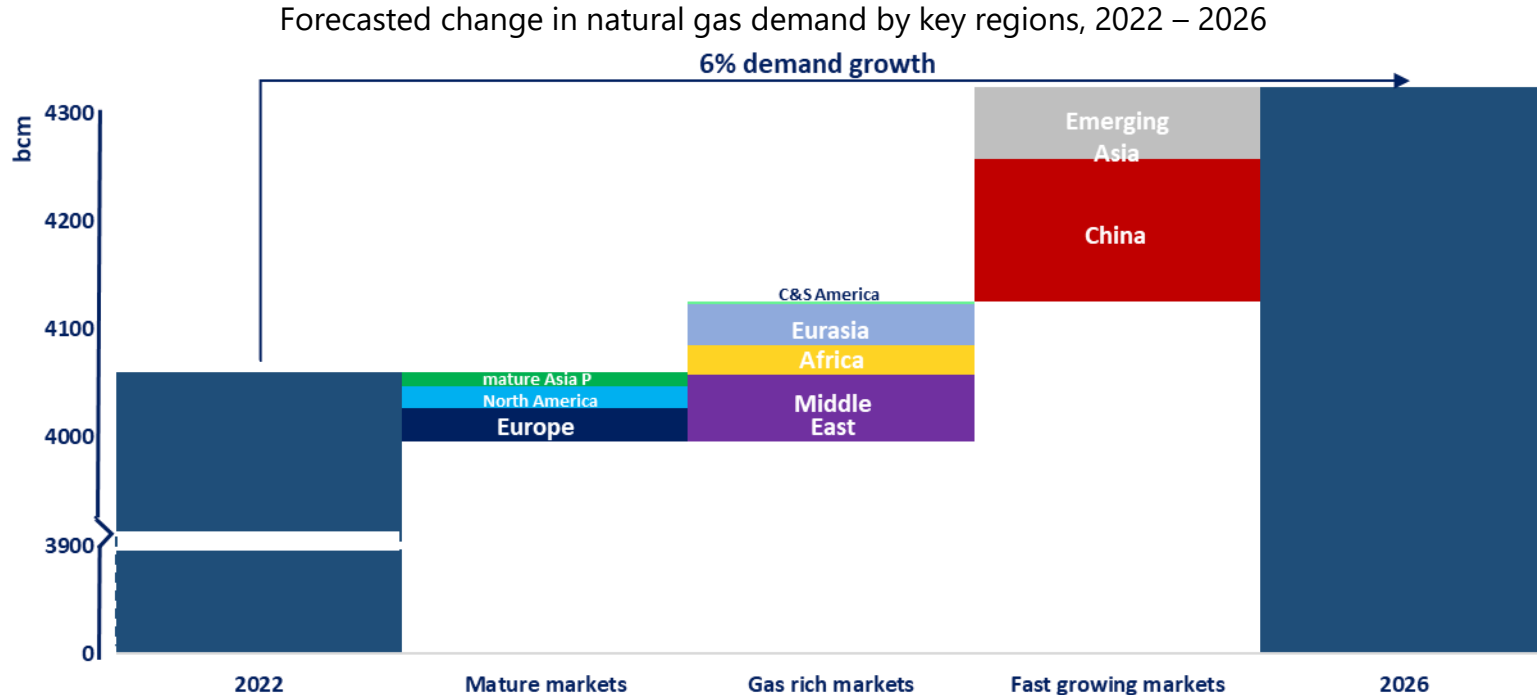
Medium-term outlook

The next LNG wave could ease market fundamentals



Global LNG supply is expected to expand by 25% between 2022-26 -with 70% of the increase concentrated in 2025-26. This strong growth could ease market fundamentals in the second half of the decade.

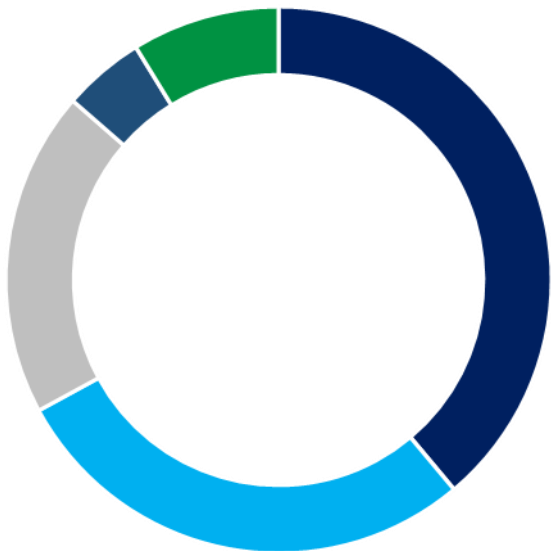
After a peak in mature markets, gas demand growth slows by a third



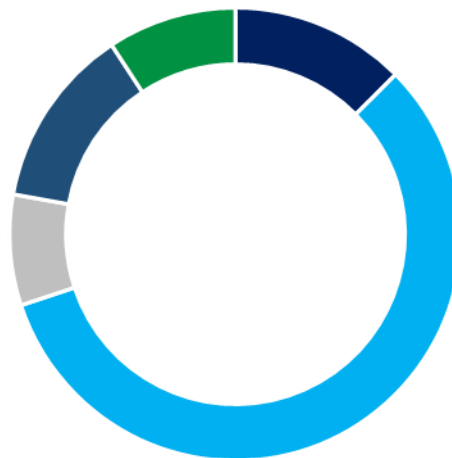
Following its 2021 peak in mature markets, gas demand growth slows down by a third and is increasingly concentrated in the Asia Pacific region and the gas-rich countries of Africa and Middle East.

Gas demand growth is increasingly concentrated in industry

Natural gas demand growth by sector,
2017 – 2021



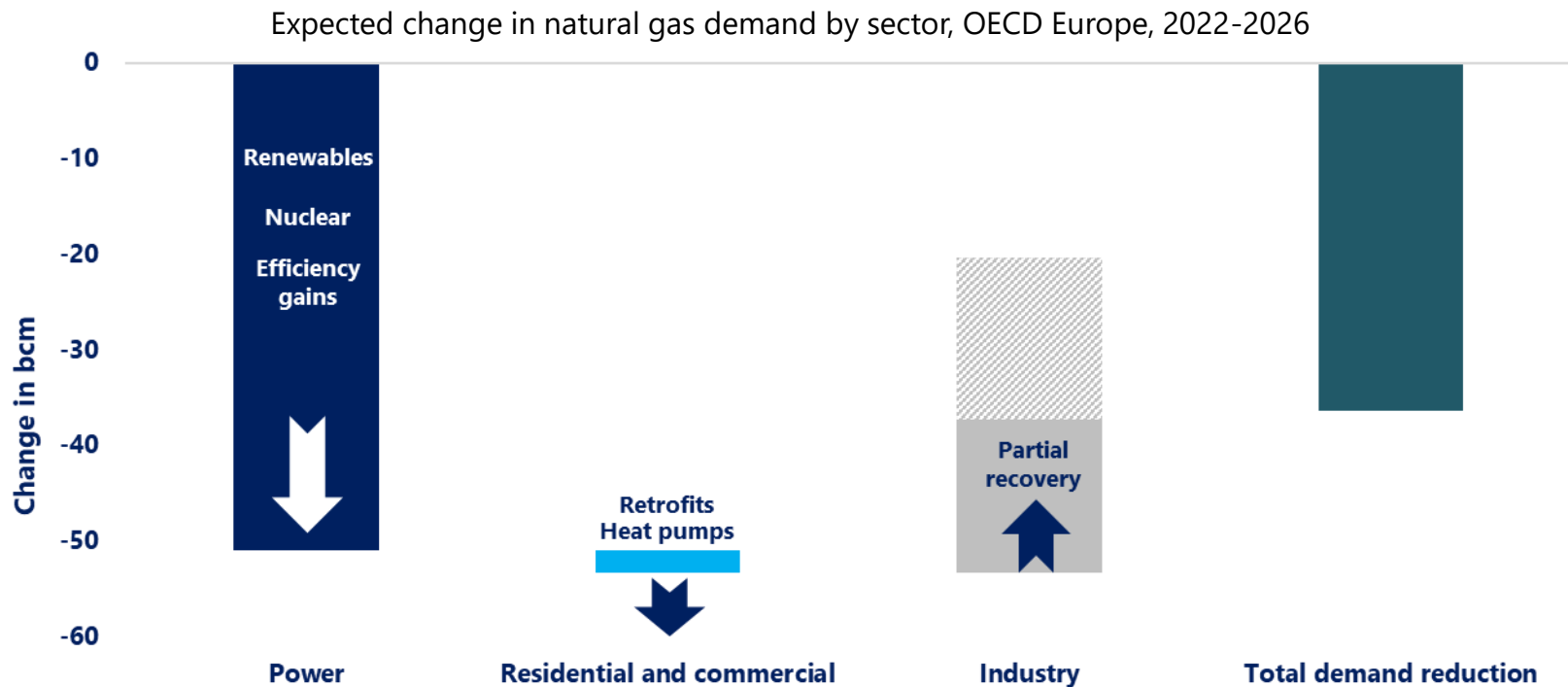
Natural gas demand growth by sector,
2022 – 2026



■ Power ■ Industry ■ Residential and commercial ■ Energy industry ■ Transport

Industry accounts for almost 60% of incremental gas demand in 2022-26. Gas burn in the power expand in emerging markets, but these gains are almost entirely offset by demand reductions in mature markets.

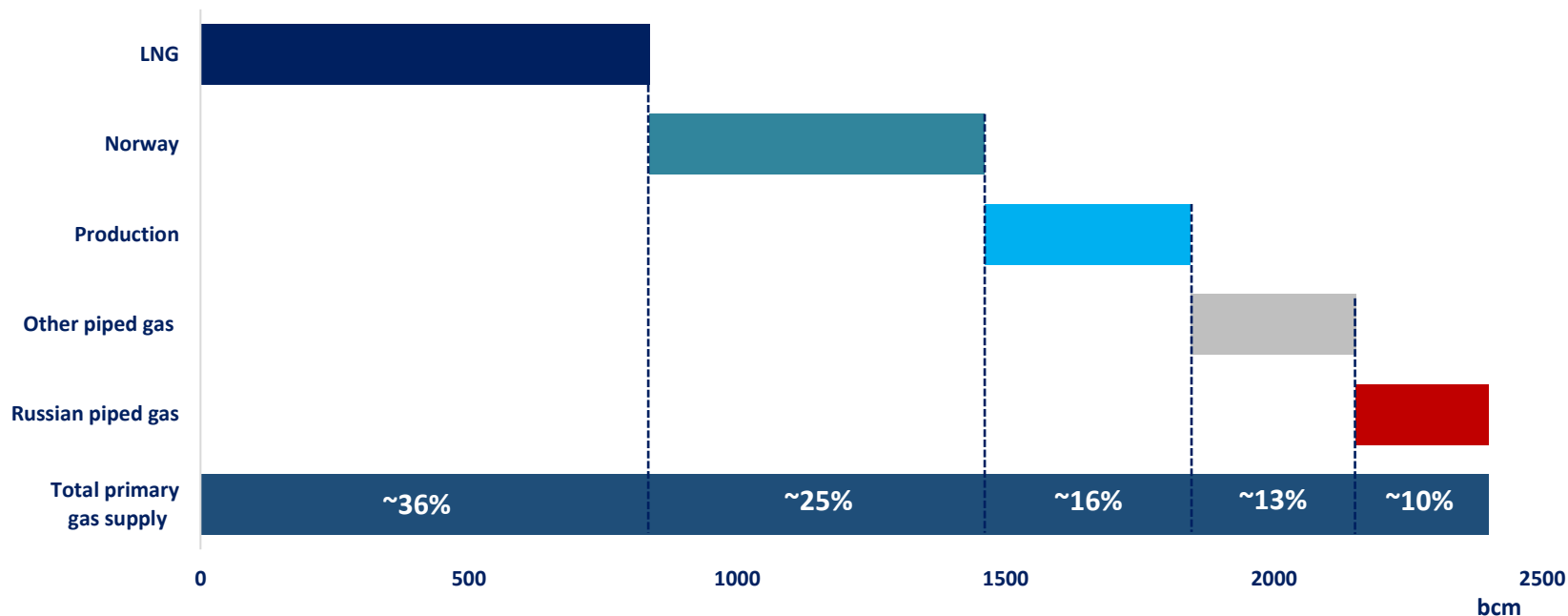
European gas demand enters a phase of structural decline



The gas supply shock triggered by Russia in 2022 reinforced the structural drivers accelerating the decline in European gas demand over the medium term.

LNG: a new baseload supply for Europe

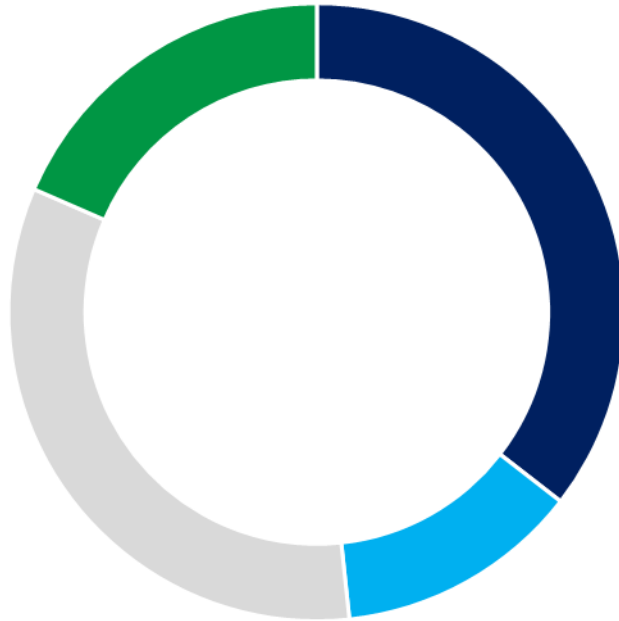
OECD Europe's primary gas supply by source (2022 – 2026)



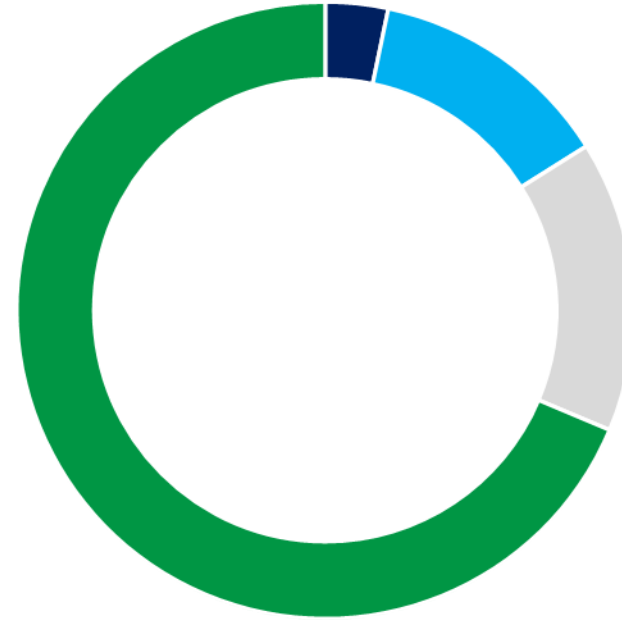
The role of LNG in the European market drastically shifted to become effectively a new baseload supply. The share of LNG in Europe's total primary gas supply is forecast to average above 35% in the medium-term.

The EU's exposure to the spot market is set to increase

EU natural gas supply by source (2021)



EU natural gas supply by source (2030)



■ Russian LTC ■ Domestic production ■ Other LTC supply ■ flexible LNG/spot

The share of spot volumes is expected to increase to more than 70% by 2030 – if expiring contracts are not renewed and no new contracts are signed.

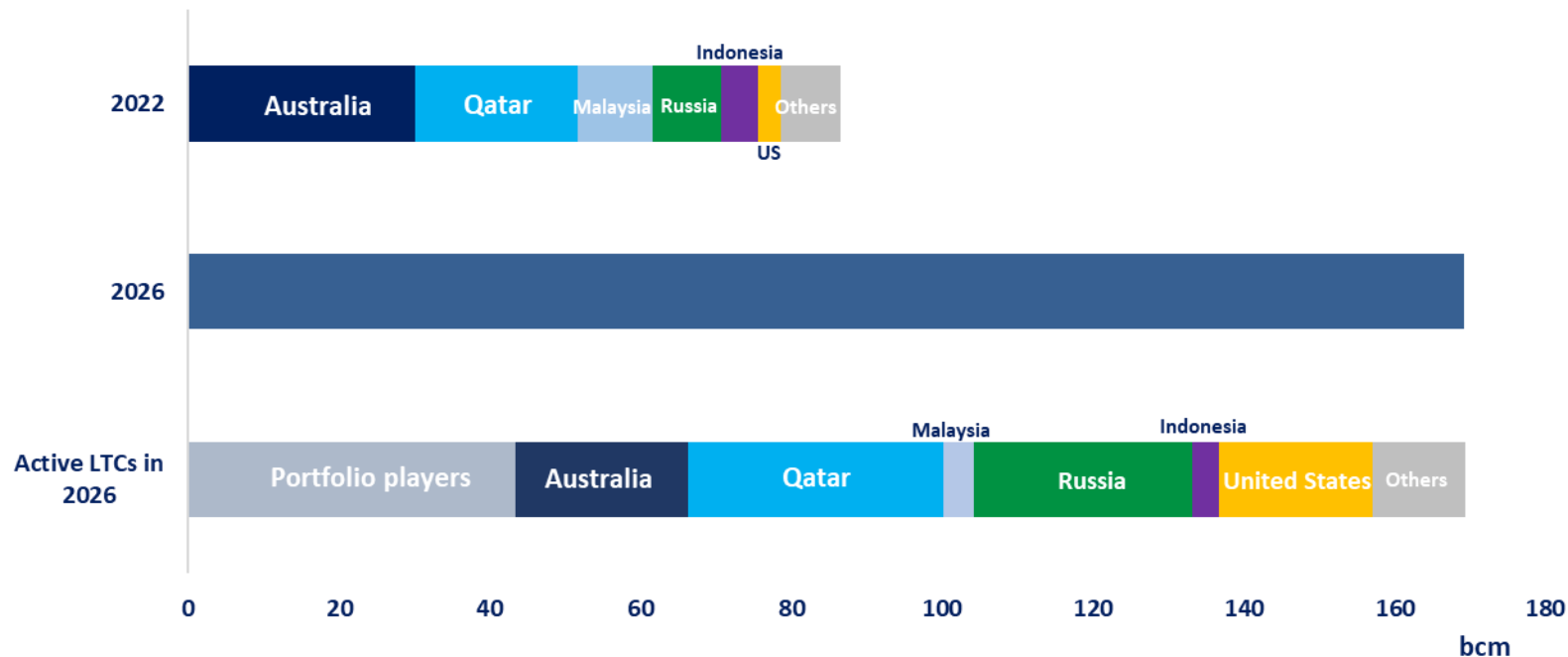
China is set to reinforce its position in LNG trading



China alone accounted for 30% of all LNG SPAs signed in the past five years. As a result, China's share of active LNG contracts is expected to rise from 12% in 2021 to close to 25% by 2030.

China is expected to double its LNG imports by 2026

Change in China's LNG imports and contractual exposure, 2022 – 2026

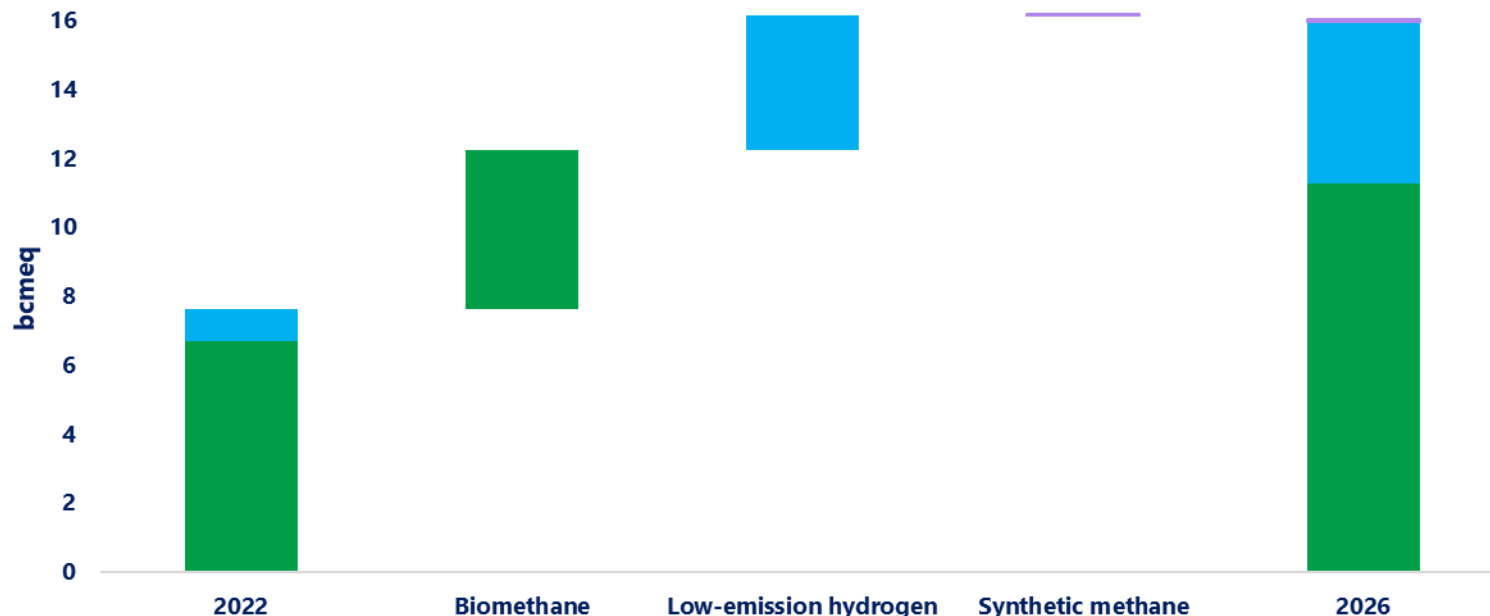


China is expected to double its LNG imports compared to 2022 and account for almost two-thirds of global LNG demand growth over the forecast period. Most of the supply will be met via long-term contracts.

Low-emission gases

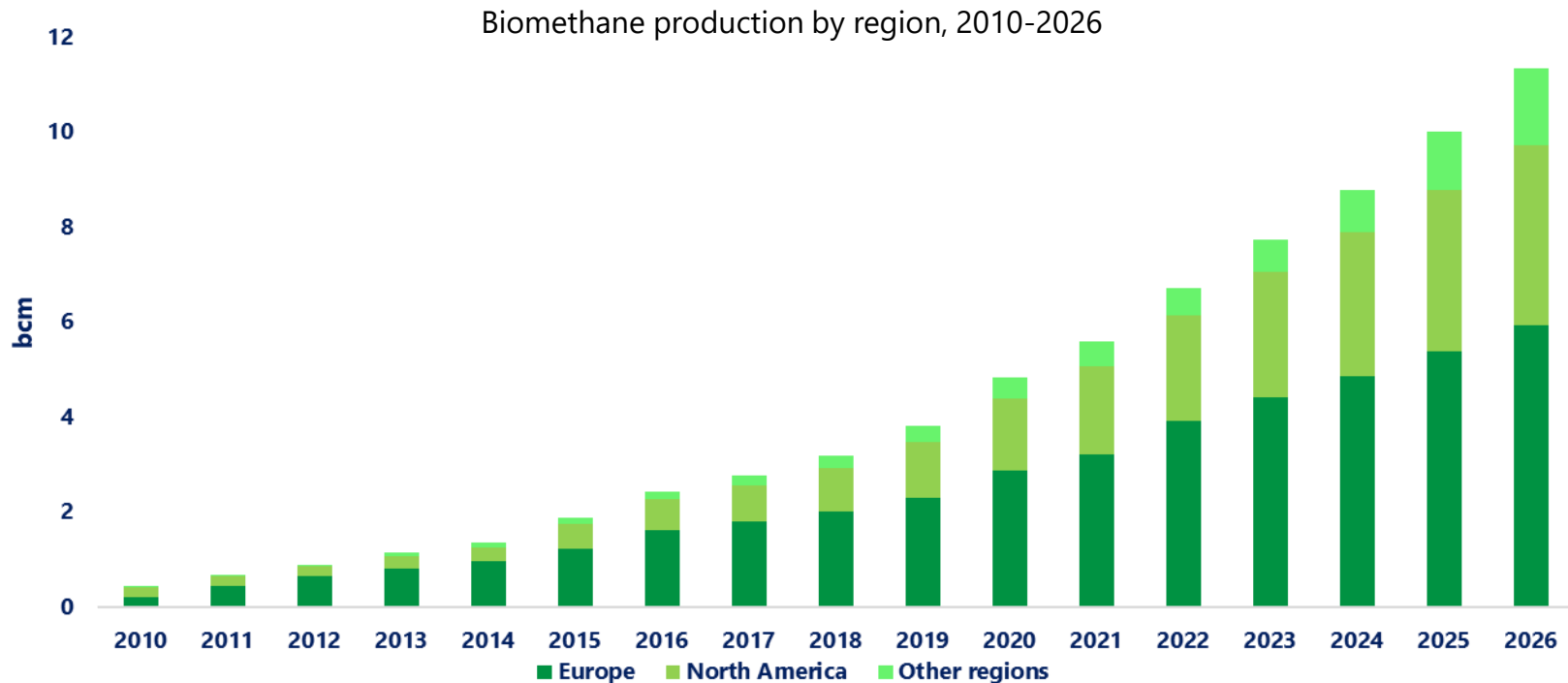
Fast and clean: low-emission gases are set for a strong growth

Estimated low-emission gas supply in 2022 and expected increase in production to 2026



Low-emission gas supply is expected to double over the medium-term, with growth led by biomethane and low-emission hydrogen. Still, further efforts are needed to unleash their full potential.

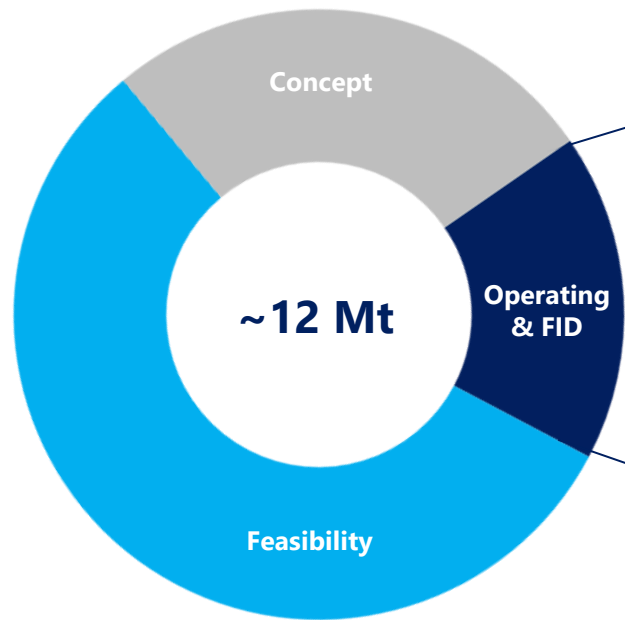
In the fast lane: biomethane is set for strong growth



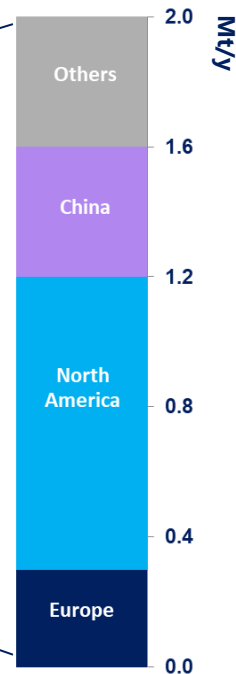
Biomethane production is expected to expand by over 65% between 2022 and 2026, primarily supported by projects undertaken in Europe, North America and Brazil.

The majority of low-emission hydrogen projects are still in early phases

Potential output of low-emission hydrogen in 2026
by current project status

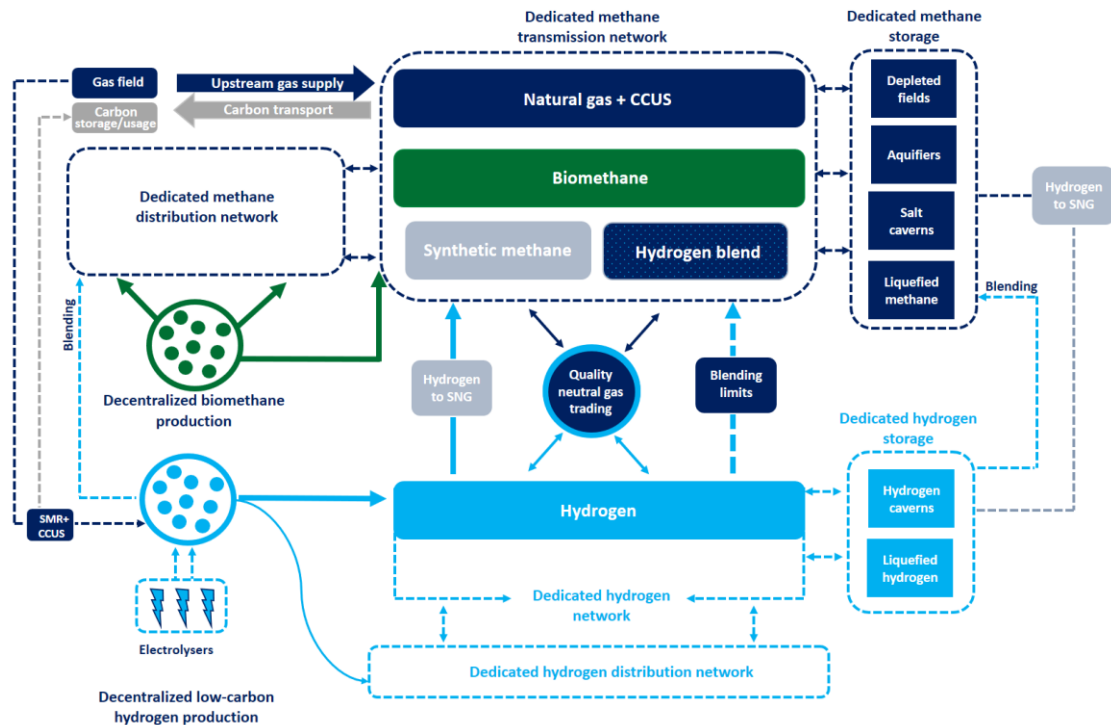


Low-emission hydrogen production in key markets (2026)



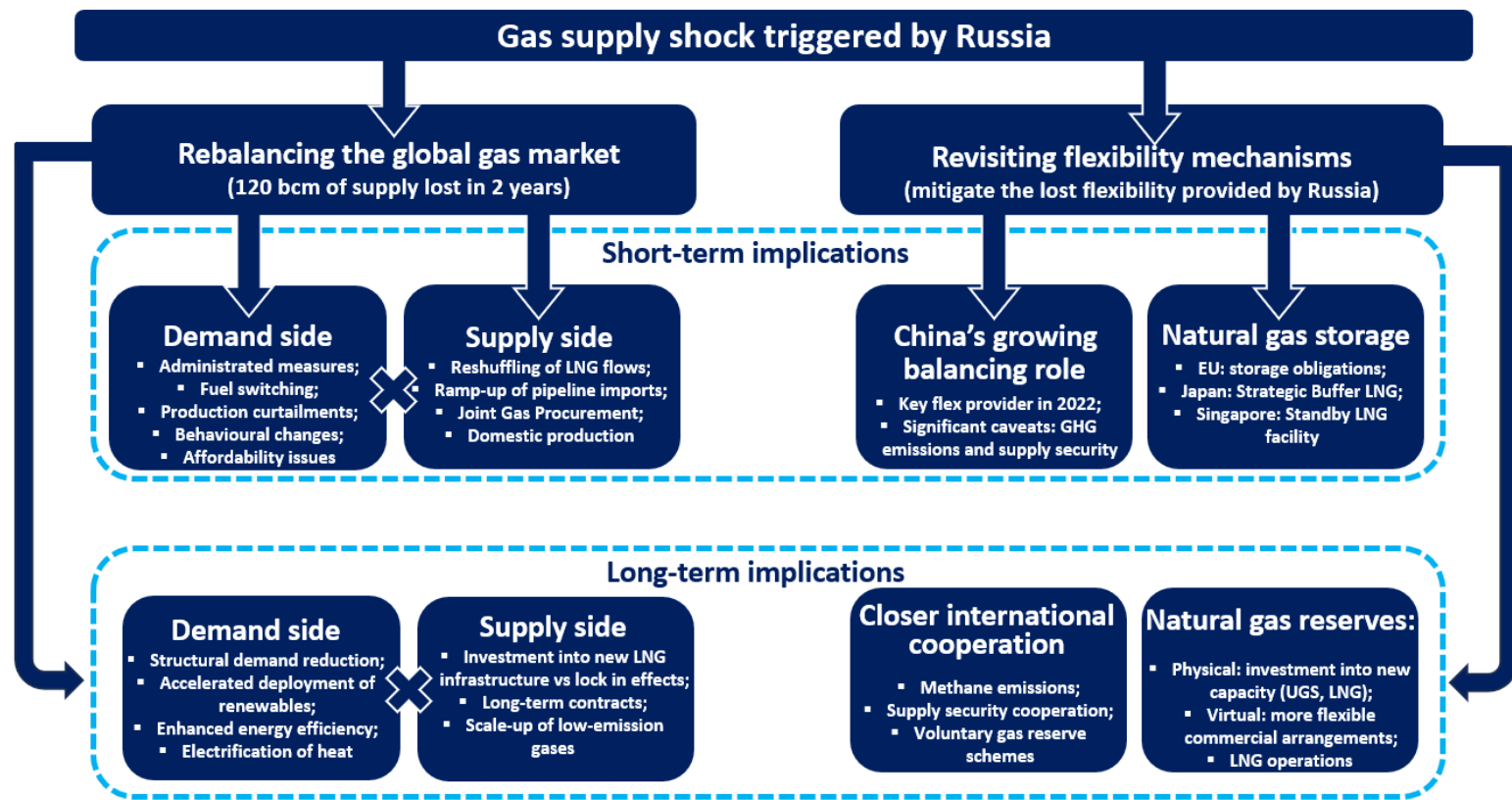
Low-emission hydrogen output is expected to more than triple and reach 6 bcm_{eq} by 2026 –although remaining well-below government's targets.

Low-emission gases will lead to a more complex gas system



The transition towards low-carbon gases will require prudent market design, taking into consideration the network integration challenges and changing supply flexibility of low-carbon gases.

A New Global Gas Market is emerging



A closer dialogue between producers and consumers is necessary



led