



# Gas Market Report 22Q4

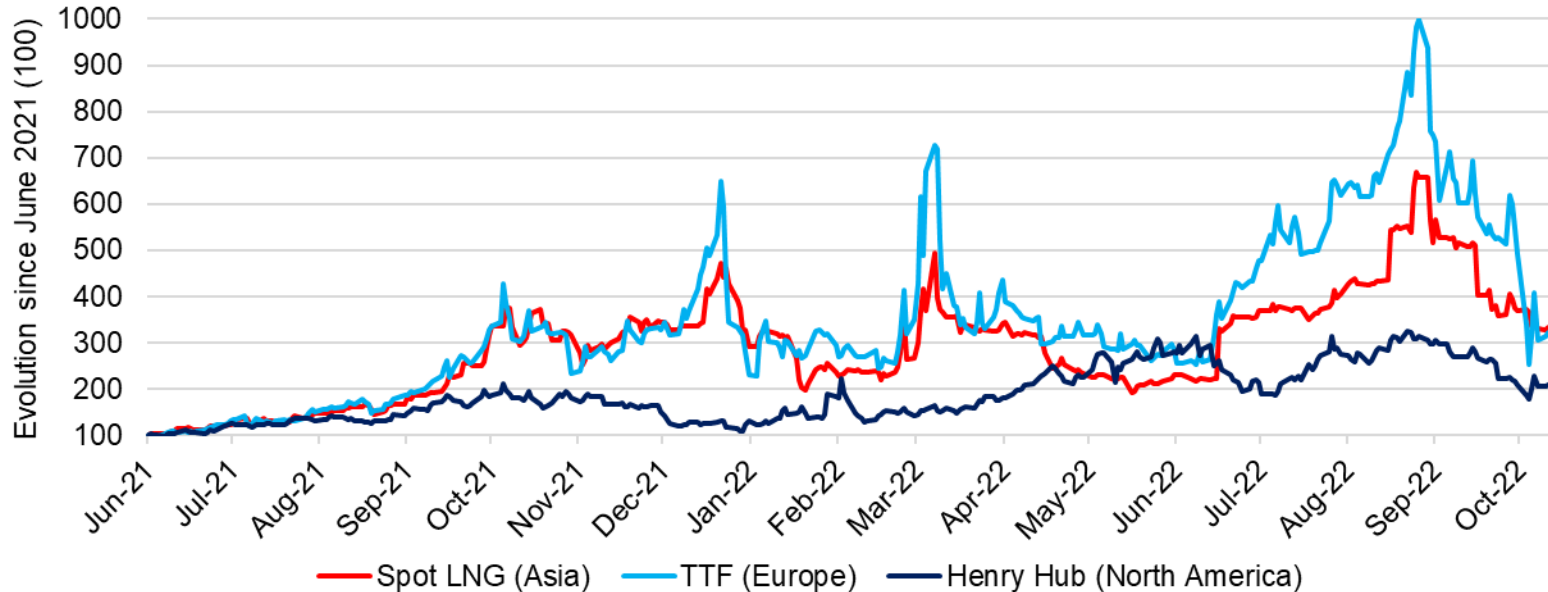
Jean-Baptiste DUBREUIL, Senior Natural Gas Analyst

Gergely MOLNAR, Gas Analyst

IAI – CIEP, 17 October 2022

# The invasion of Ukraine drove European and Asian prices to record highs

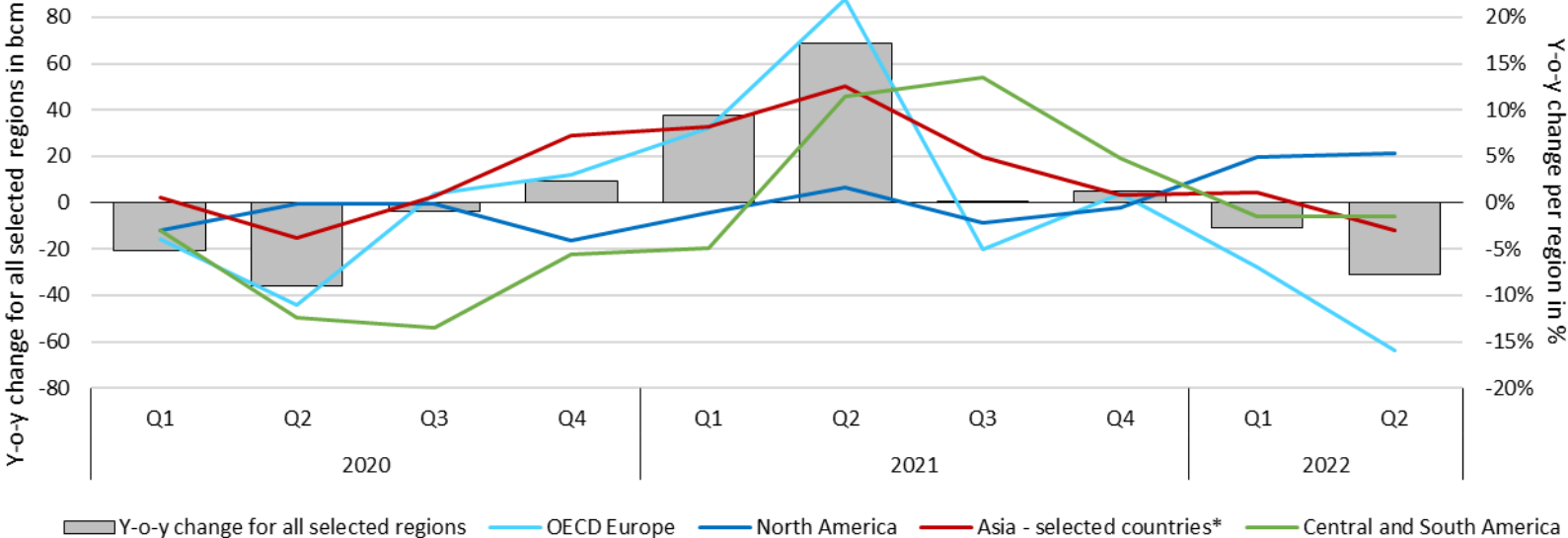
Evolution of key regional natural gas prices since mid-2021



Russia's invasion of Ukraine created a period of unprecedented uncertainty and volatility for European and Asian spot prices alike.

# High prices erode gas demand across the main markets

Estimated change in gas demand, selected regions, 2020-2022

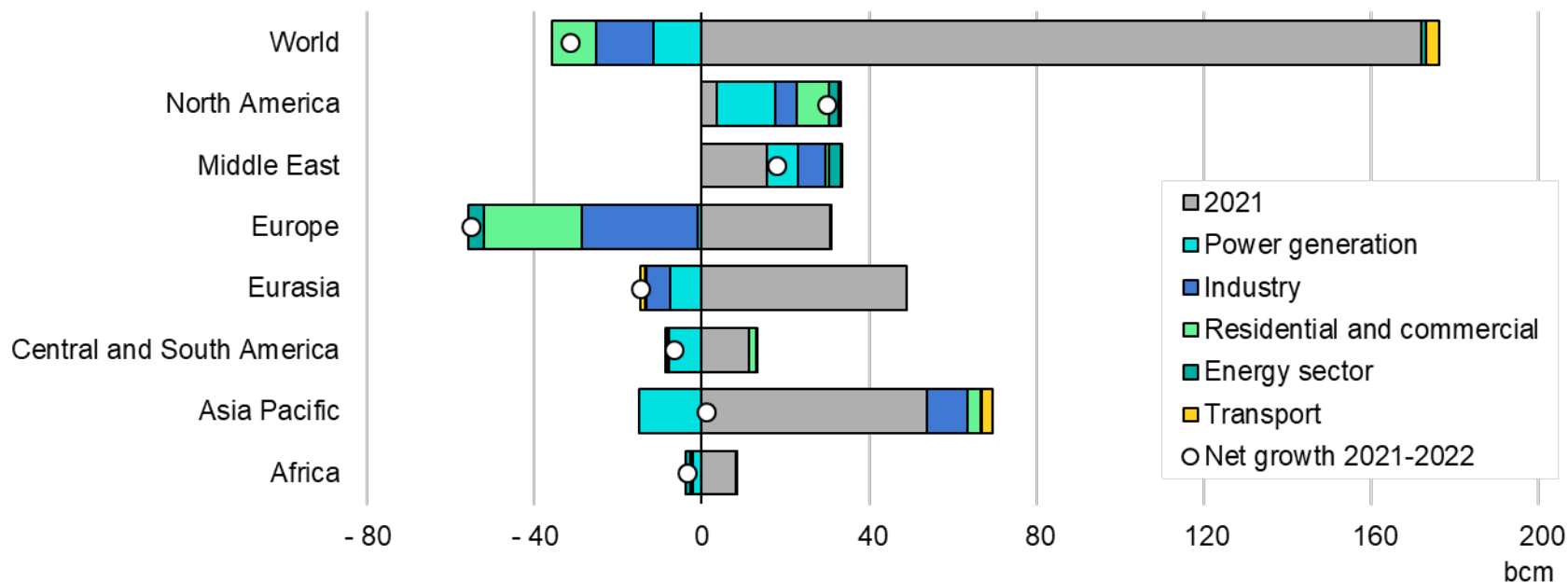


\*China, India, Indonesia, Japan, Korea and Thailand

Tight gas supply and high prices have triggered fuel switching and demand destruction across all major gas-importing markets.

# Global gas growth turns negative in 2022 after a 4.5% jump in 2021

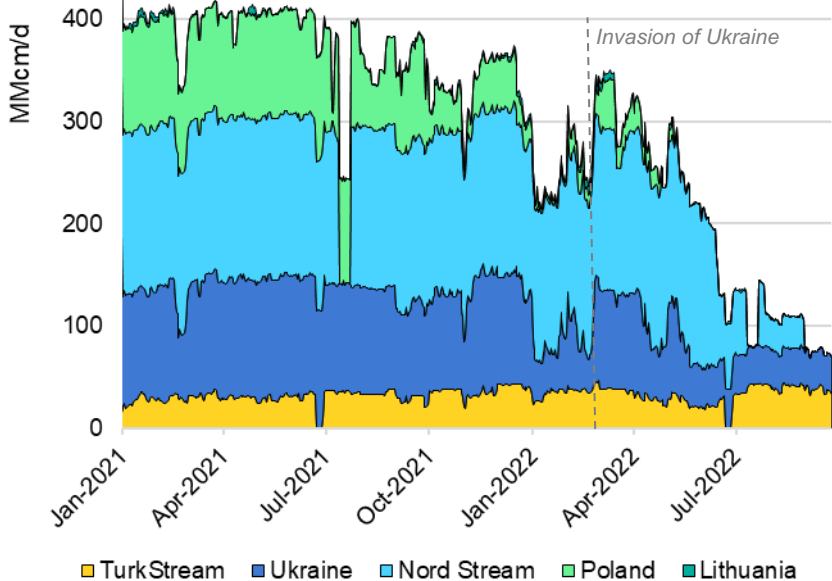
Change in gas demand by region, 2021-2022



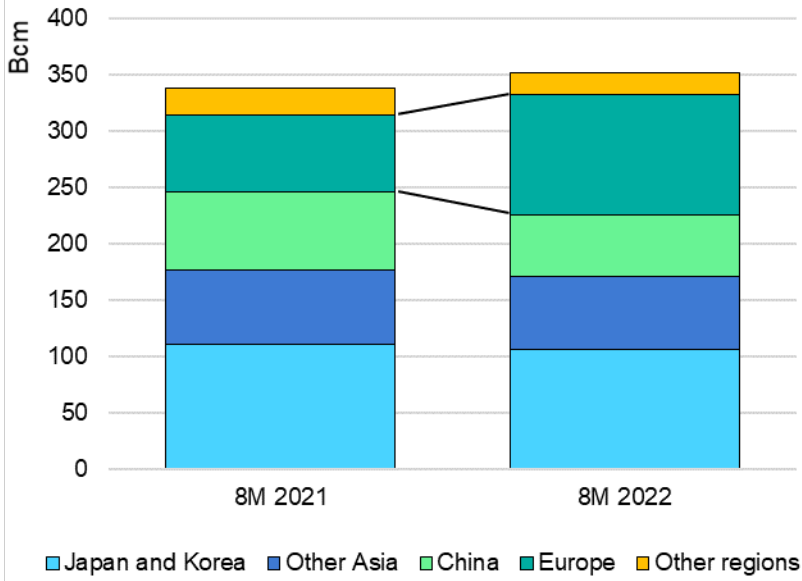
Asia Pacific demand increase is capped by tensions on access to supply, while European gas consumption is foreseen to plunge below its 2020 level.

# Europe turns into a premium market for LNG as Russian flows tumble

Russian gas pipeline flows to the EU and Türkiye, 2021-2022



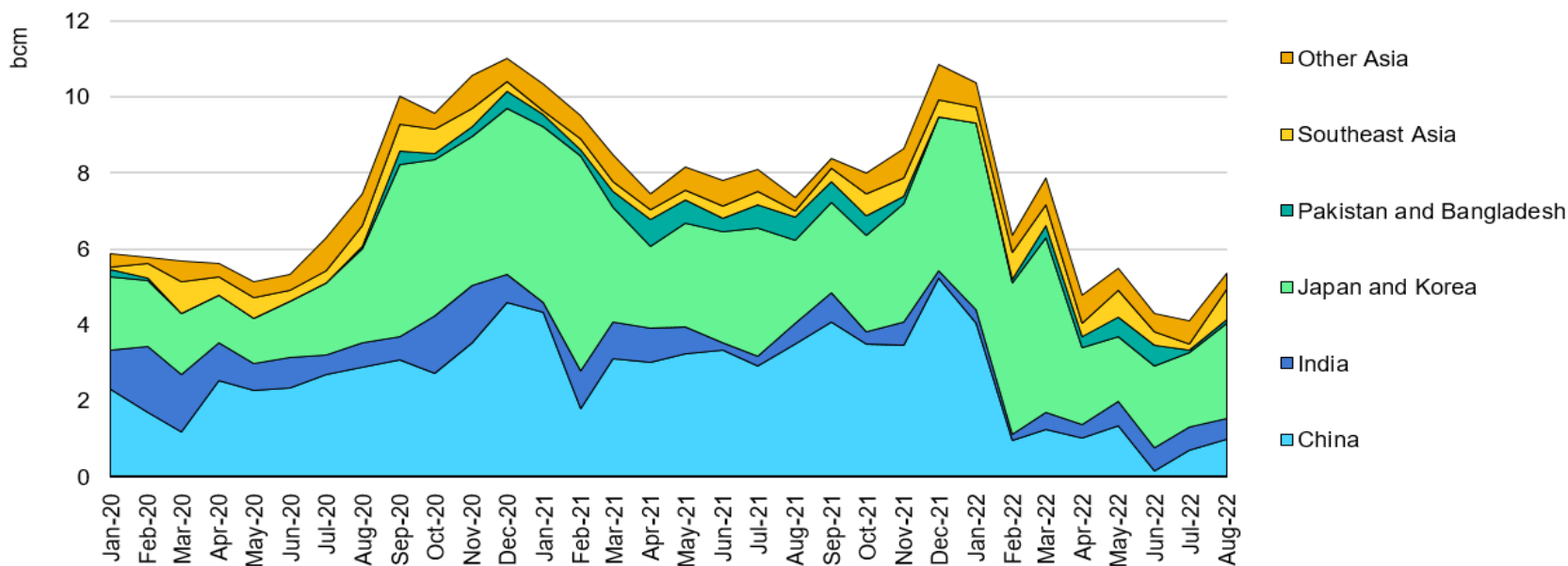
LNG demand per main market (Jan-Aug), 2021-2022



In 8M 2022, Russian pipeline flows to Europe dropped by about 40%, triggering a 65% increase in net LNG imports and a wholesale realignment of LNG trade flows around the world.

# Global LNG market tightness induces shifting trade patterns in Asia

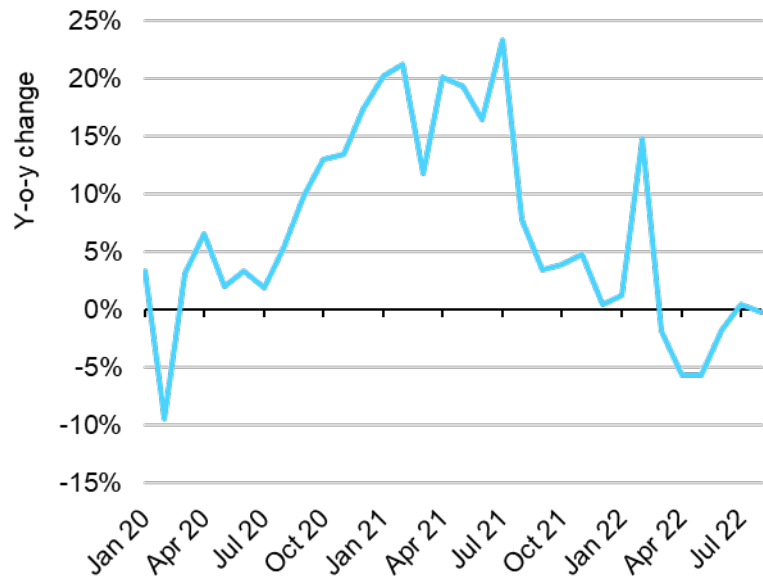
Evolution of spot LNG trade in Asia Pacific, 2020-2022



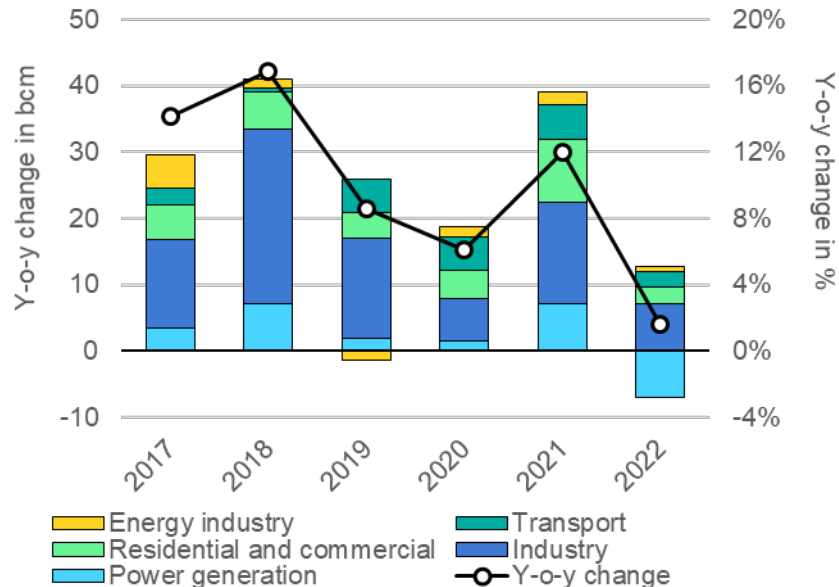
Asian spot LNG imports collapsed and about 40% of short-term tenders were left unawarded in January-August 2022.

# Weak Chinese demand provided relief for the European market

Monthly gas demand, China, 2020-2022



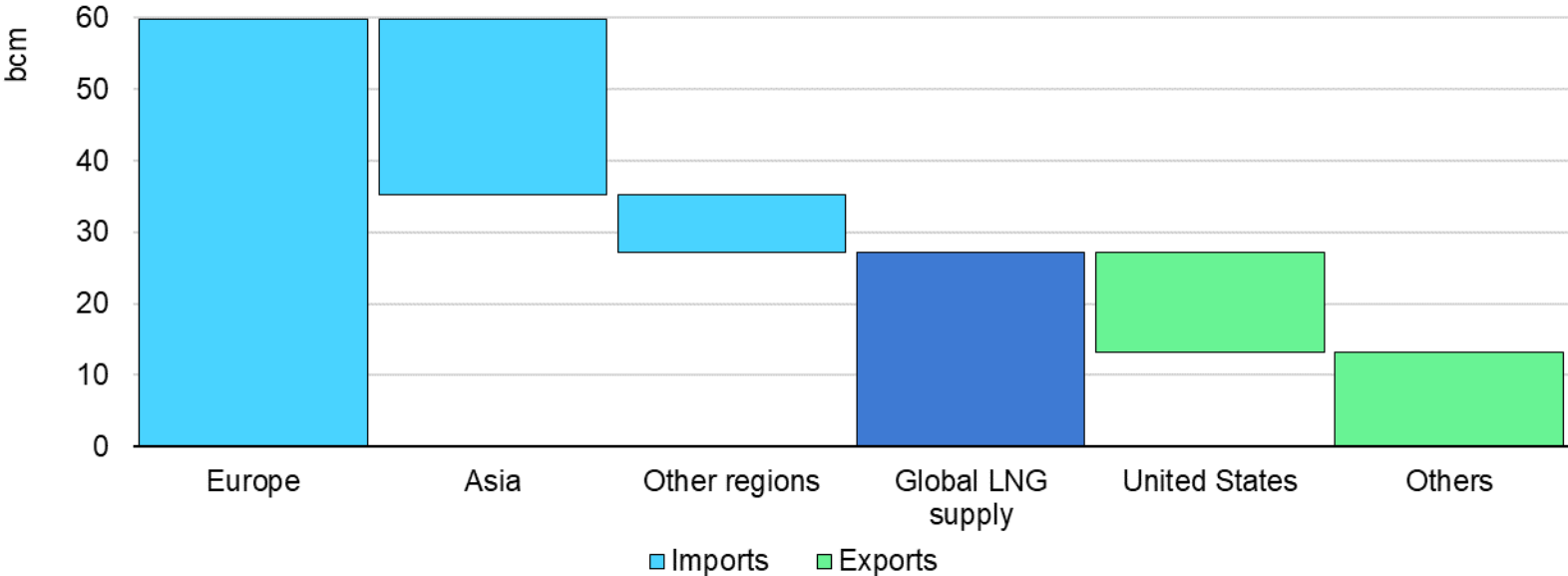
Annual gas demand, China, 2017-2022



China's gas demand is forecasted to increase by less than 2% in 2022, its lowest annual growth rate since the early 1990s.

# Europe's incremental supply needs drive LNG growth and tightness

Global LNG balance, y-o-y change, 2021-2022

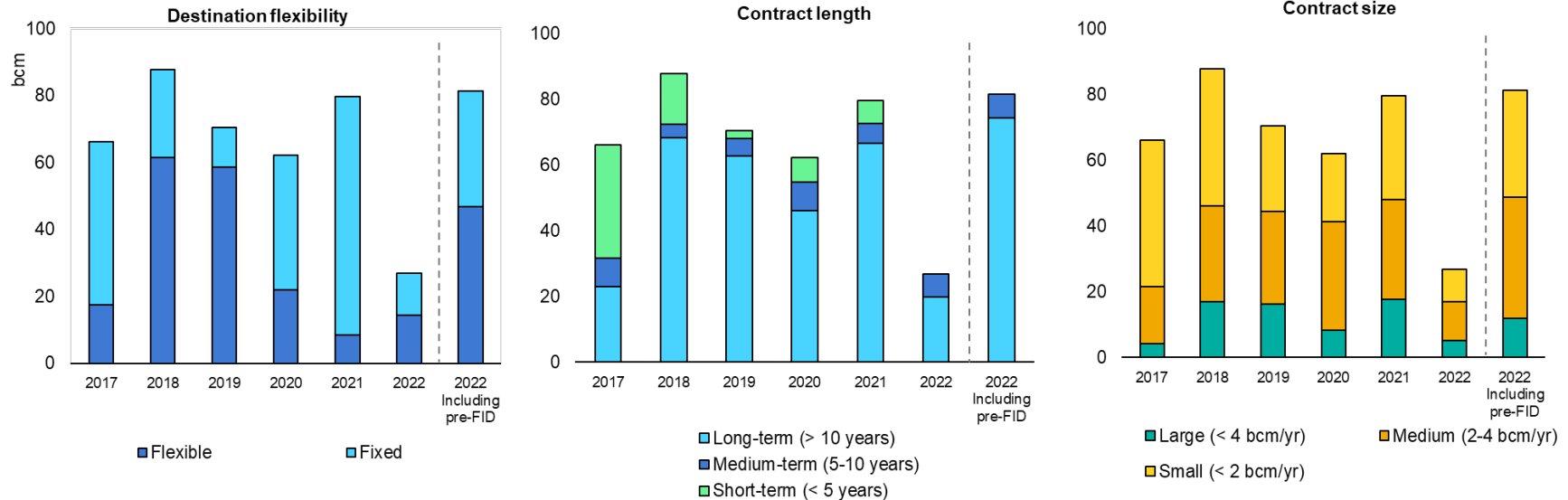


Global LNG trade flows reconfigure as Europe's incremental LNG needs are expected to account for over twice the amount of supply capacity additions in 2022.



# Recent contracting trends present a shift to less flexible LNG supply

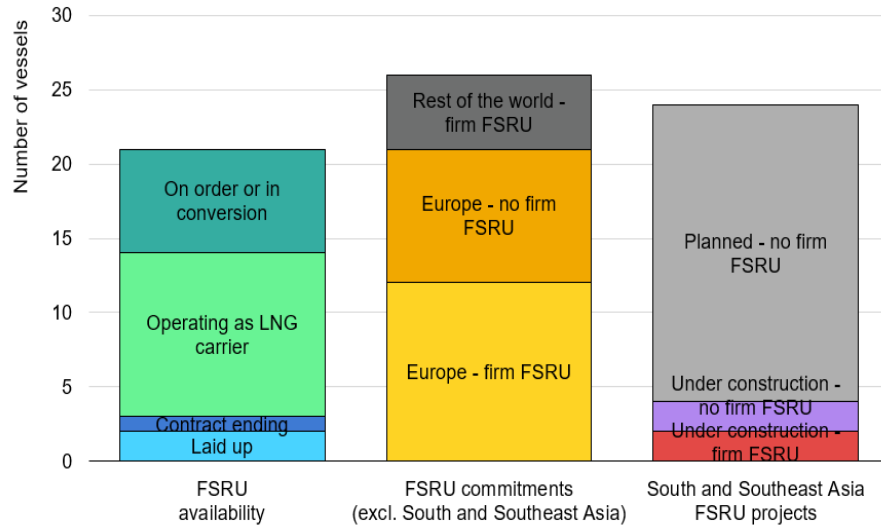
Volume of LNG contracts concluded in each year split by contractual element (2017-2022 to date)



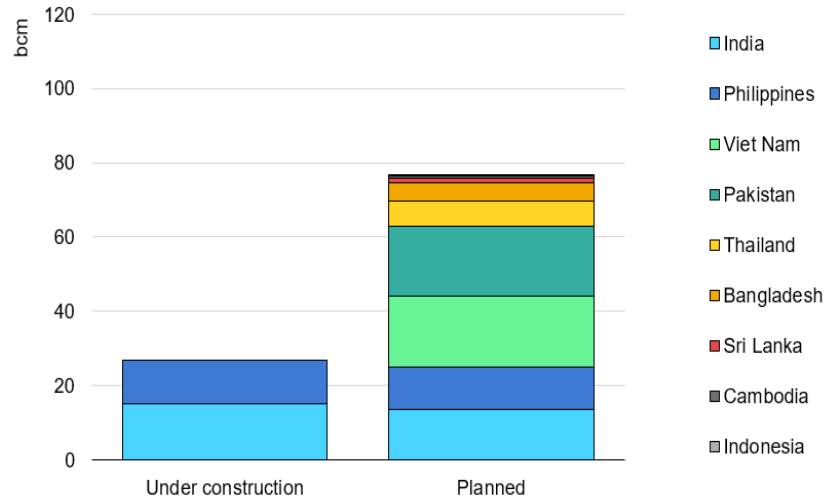
Destination-free contracts, which accounted for almost 80% of the average contracted volumes in 2018-2019, dropped to 35% in 2020 and 11% in 2021.

# Most of the FSRU-based projects are at risk in South & Southeast Asia

FSRU availability and requirements as of August 2022



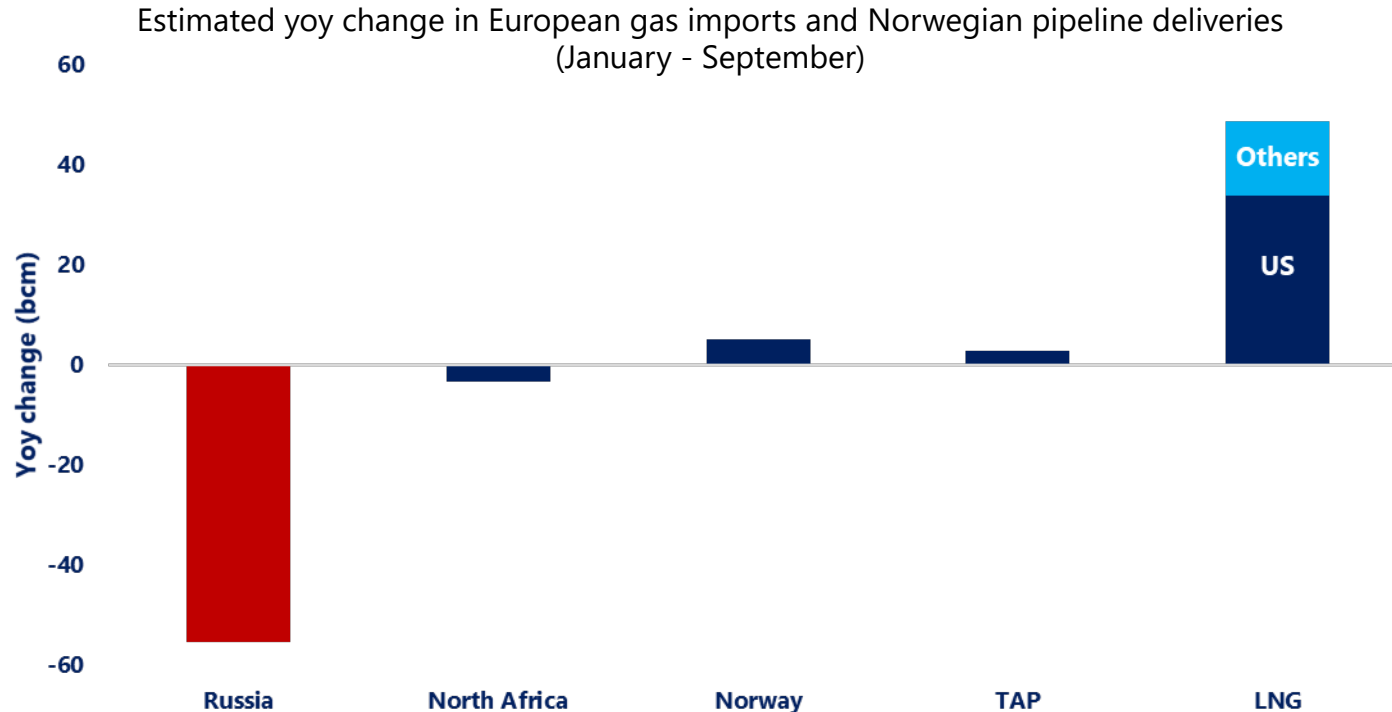
FSRU projects by status in South and Southeast Asia



Europe's rapidly rising LNG requirement has drawn away not only flexible LNG volumes from Asia, but also the limited number of FSRU vessels available for hire in the foreseeable future.

# Focus on Europe

# Lower Russian flows were compensated by record LNG inflow



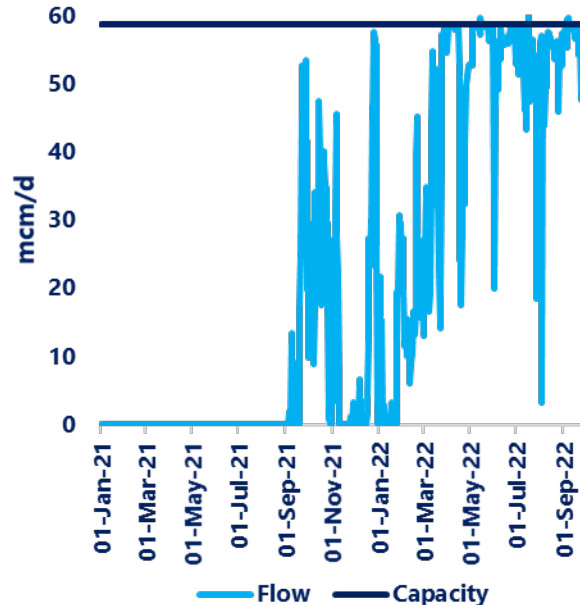
Russia reduced its piped gas supplies to Europe by over 40% y-o-y since the beginning of the year, partly compensated by the record high LNG inflow –primarily from the United States.

# Shift in import patterns led to infrastructure congestions in Europe...

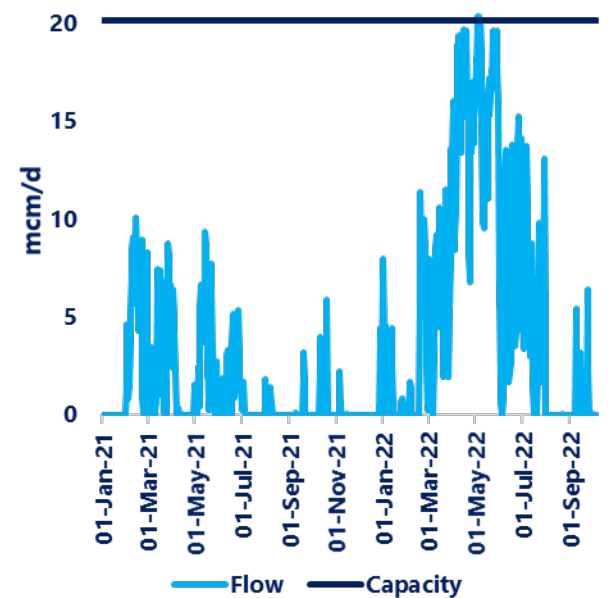
## LNG imports into NWEU



## UK to EU flows via IUK

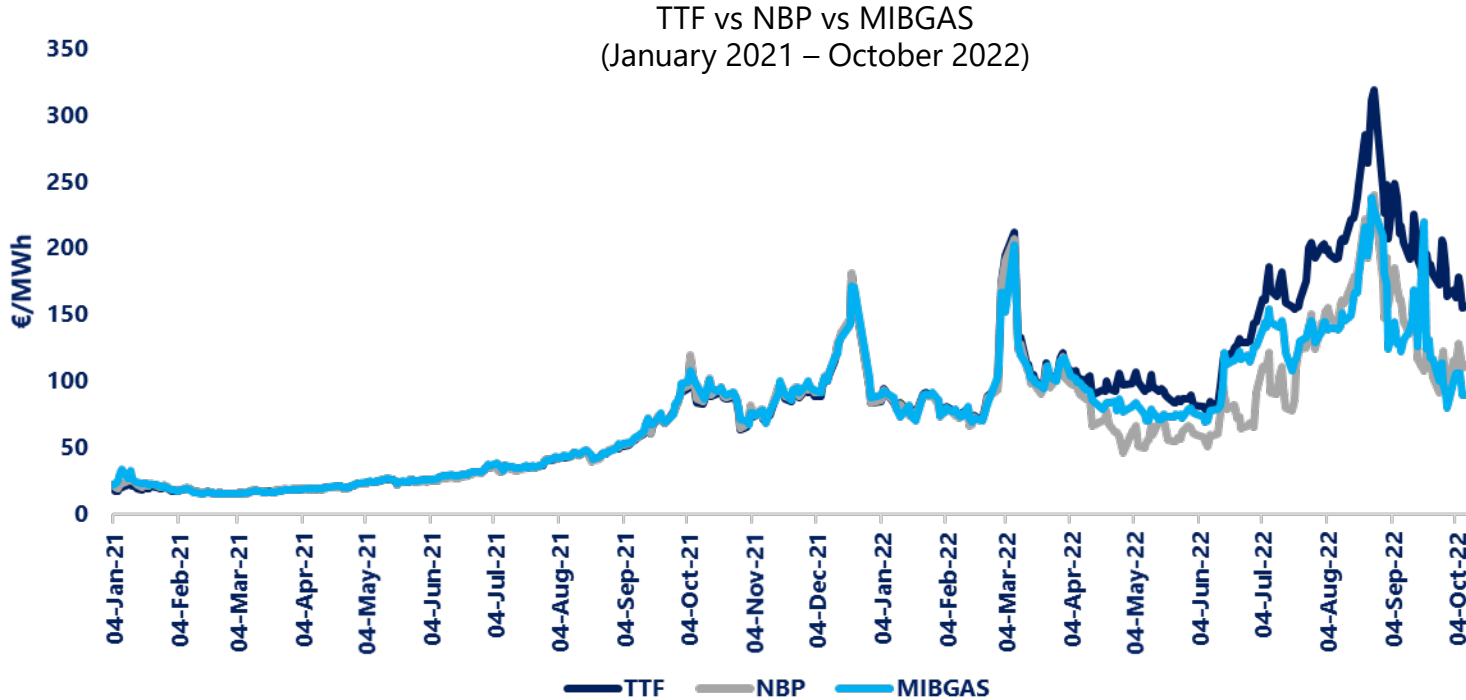


## Spain to France flows



Record levels of LNG imports led to a reconfiguration of flows in Europe, resulting in infrastructure congestions and pipeline bottlenecks.

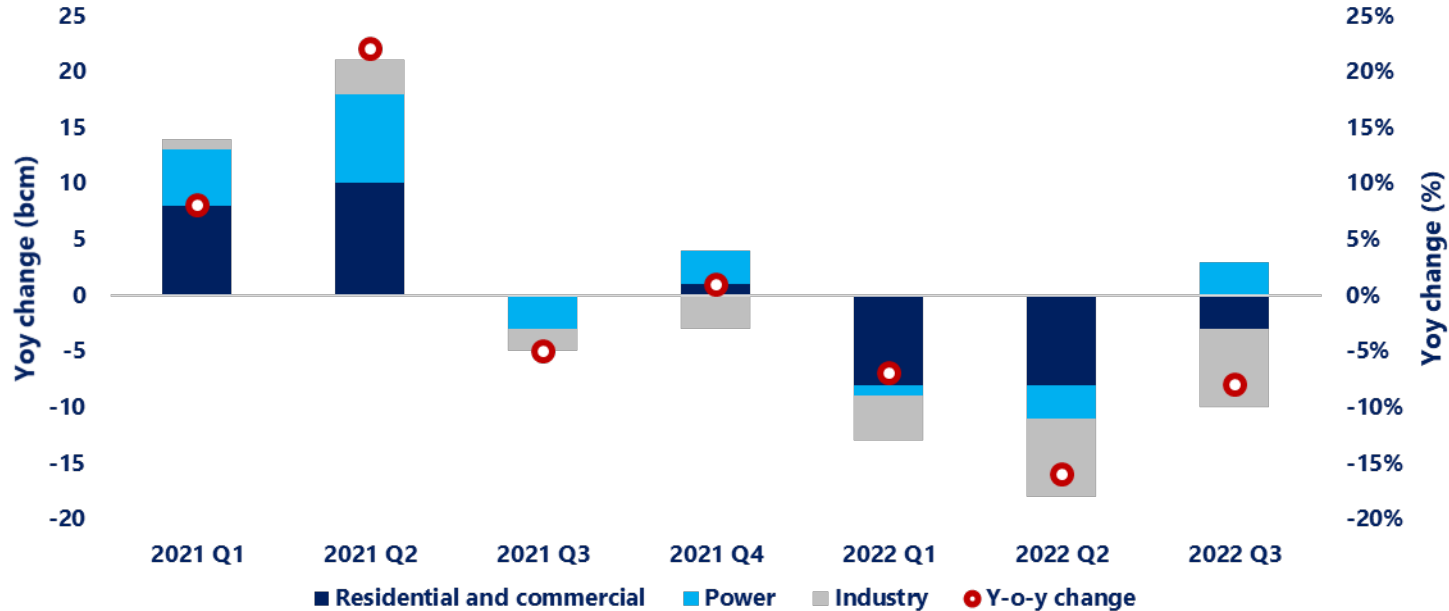
# ...and to widening price differentials between hubs



Markets with greater access to LNG displayed significant discounts compared to TTF during Q3 2022.

# OECD Europe gas demand dropped by close to 10% in 9M 2022

Estimated quarterly change in gas demand, OECD Europe, 2020-2022

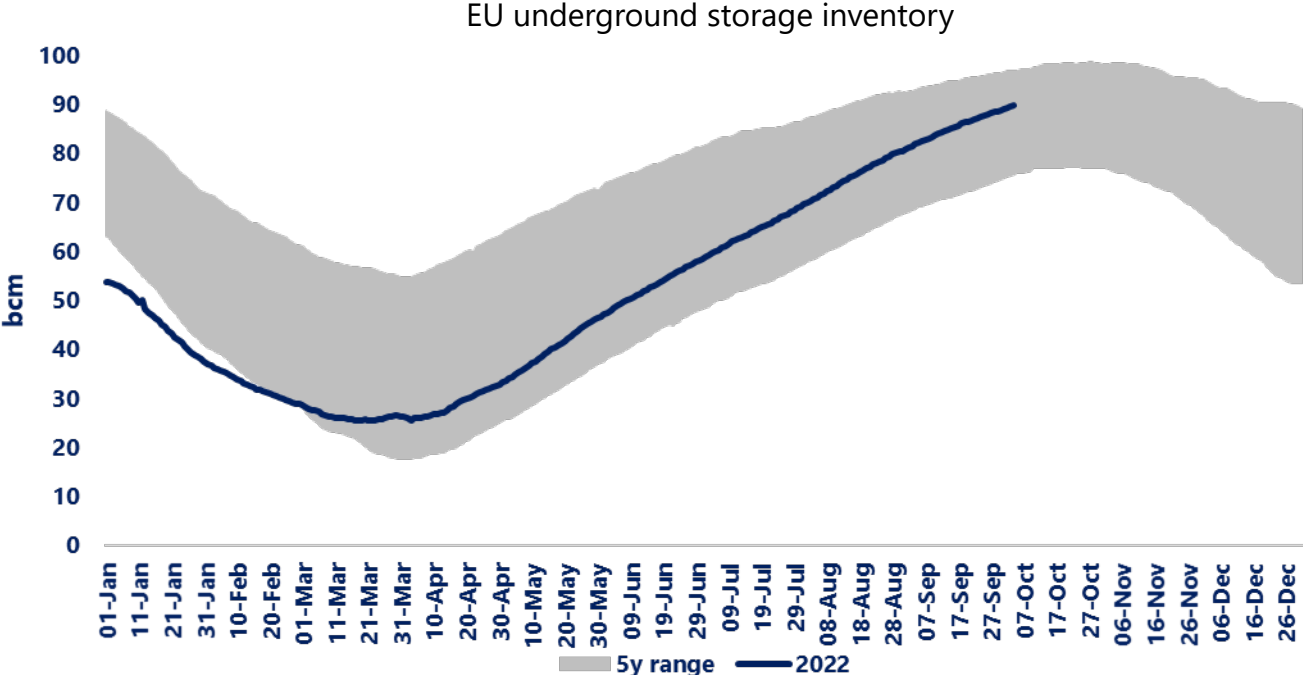


Milder temperatures weighed on distribution-network related gas demand, whilst gas burn in the power sector remained resilient. Industry displayed strong demand response through Q1-3 2022.

**Winter is coming...**



# EU storage levels hit 90% fill levels in first week of October 2022

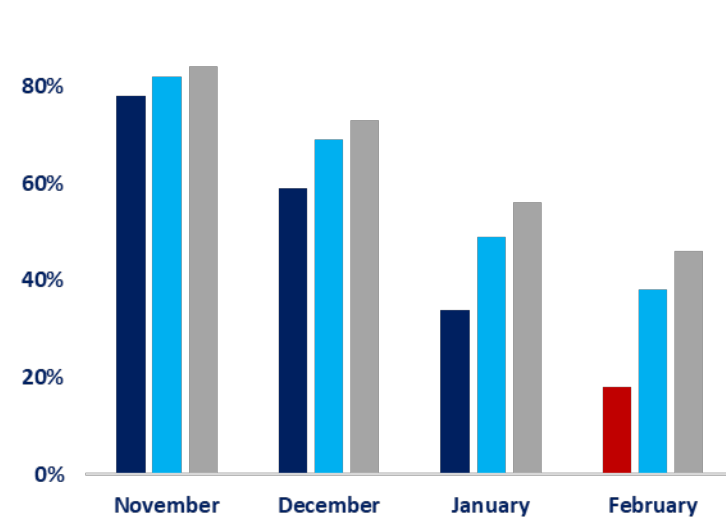


All-time high LNG inflow, together with strong demand response allowed for near-record storage injections this summer.

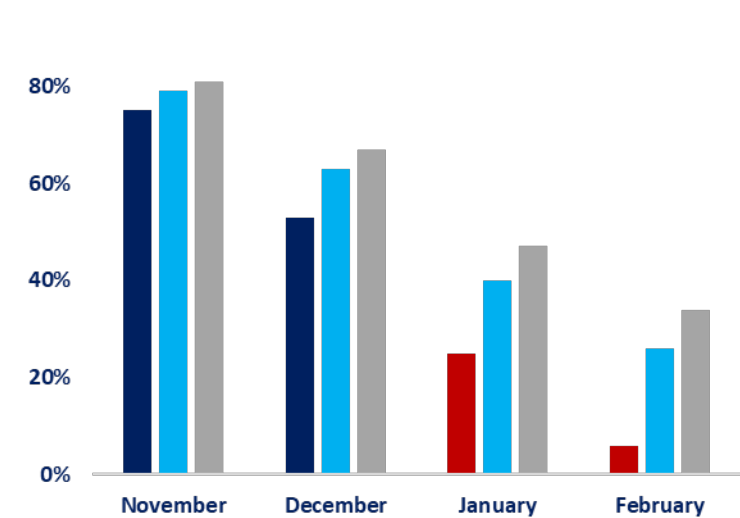
# Storage levels and demand reduction: an intimate interplay

Storage levels under different scenarios, assuming complete cut of Russian pipeline gas supplies from 1 Nov 2022

Storage levels under high LNG inflow



Storage levels under low LNG inflow



■ Storage levels with no demand reduction

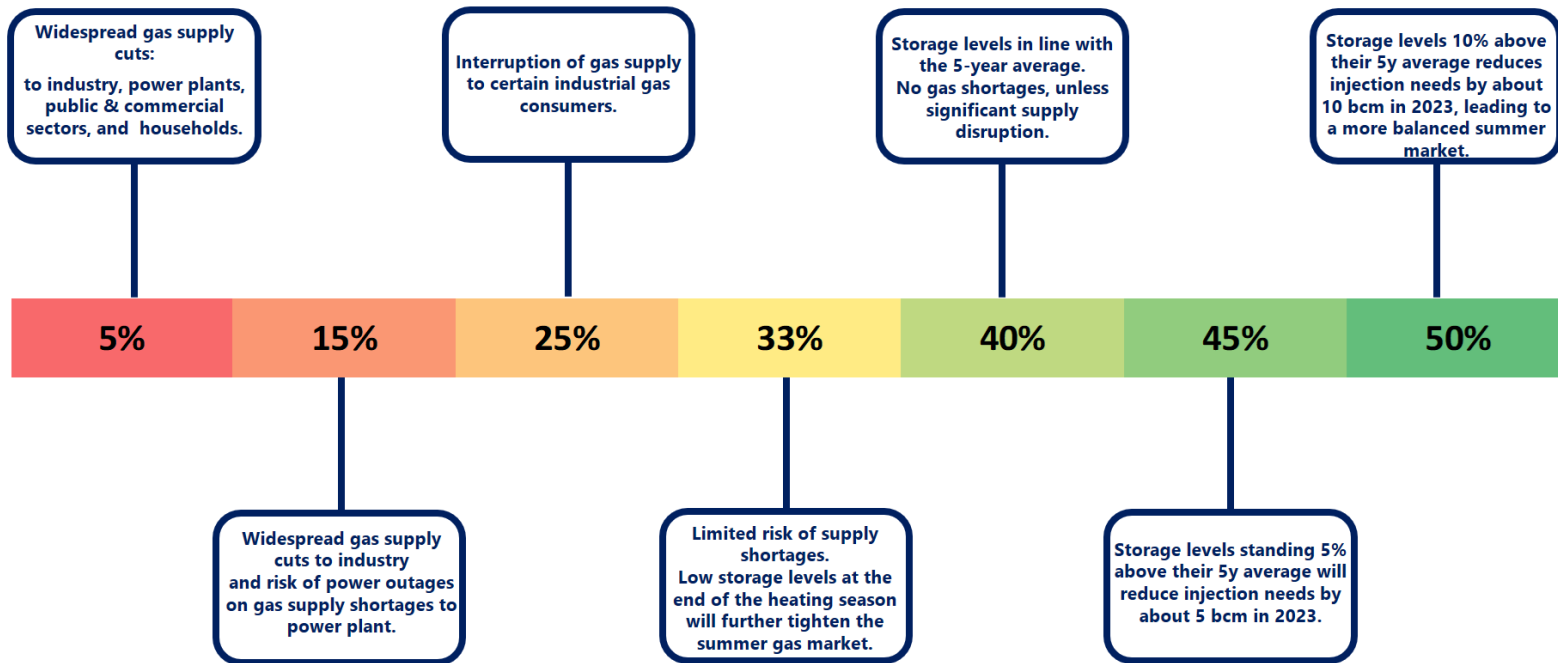
■ Storage level with 9% demand reduction

■ Storage levels with 13% demand reduction

Storage levels could fall well below 30% in the case of no demand reduction this winter.

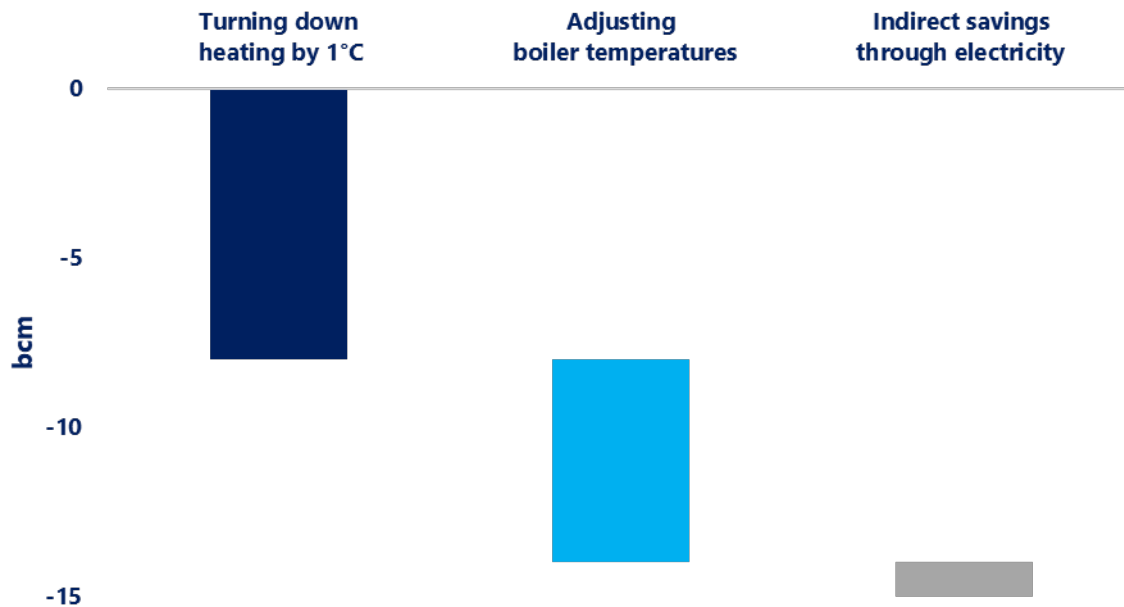
# Maintaining adequate storage levels through the winter will be crucial to ensure gas supply security

Gas supply security under different storage levels at the end of Feb23, in case of cold spell and no Russian gas



# European citizens can save 15 bcm of gas this winter

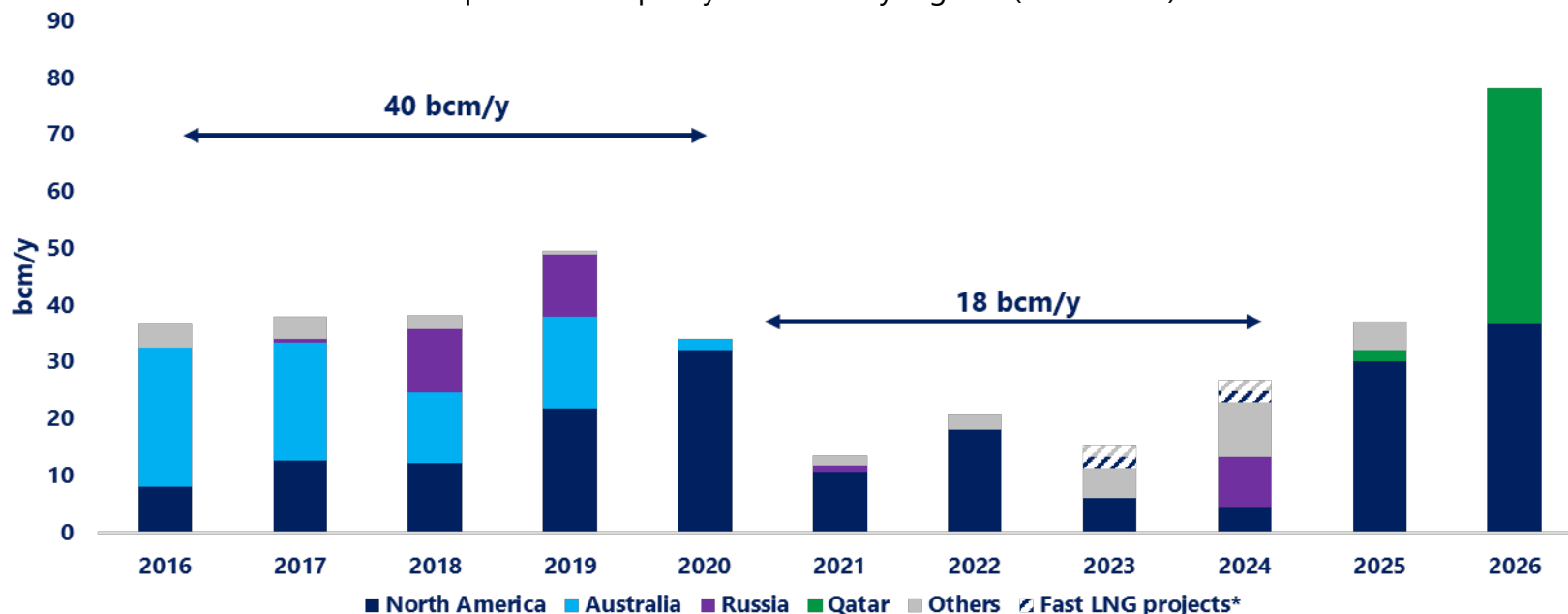
Potential natural gas savings from behaviour change during the 2022/23 heating season



Our analysis indicates that behaviour change could reduce gas demand by 15 bcm during the 2022/23 heating season.

# Dry years ahead: LNG capacity additions are set to slow down

LNG liquefaction capacity additions by regions (2016-2026)



\*Congo and Louisiana FLNG could be fast-tracked to start operations in 2023 according to project developers. No FID has been taken yet.

Limited liquefaction capacity additions, and strong LNG demand from Europe, indicates that the current tight market conditions are expected to linger into the medium-term.